KENWOOD

HD COMPONENT SYSTEM/COMPACT HI-FI SYSTEM

HD-600

INSTRUCTION MANUAL

KENWOOD CORPORATION

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for informmation or service on the product.

Model _____ Serial Number _____

Unpacking

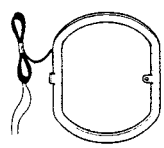
Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost. Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

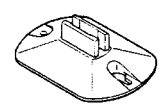
Accessories

Accessories packaged together with model A-601

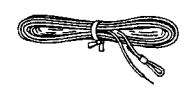
AM loop antenna (1)



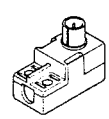
Loop antenna stand (1)



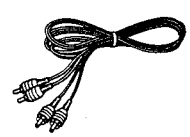
FM indoor antenna (1)



Antenna adaptor (1)

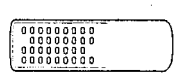


Audio cord (2)

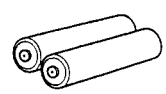


System control cord (1)

Remote control unit (1)

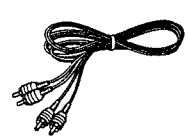


Batteries (R6/AA) (2)



Accessories packaged together with model X-601

Audio cord (2)



COMPACT disc DIGITAL AUDIO

B60-1693-00 (E, T, L) (SI) (G)

Before applying power

Units are designed for operation as follows.

U.K. ..... 240 V only
Europe (Except for U.K.) ..... 230 V only

For the United Kingdom

Factory fitted moulded mains plug

1. The mains plug contains a fuse. For replacement, use only a 13-Amp ASTA-approved (BS1362) fuse.
2. The fuse cover must be refitted when replacing the fuse in the moulded plug.
3. Do not cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or adapter, or consult your dealer.
   If nonetheless the mains plug is cut off, remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.

Strömbrytarens POWER beredskapsläge

Indikatorn STAND BY tänds efter nätkabelns anslutning till ett vägguttag, oavsett strömbrytarens POWER till/frånslag. Detta anger att en liten mängd ström leds till komponenten som stöd för minnesinnehållet.
Detta läge kallas för beredskapsläget. Strömbrytaren på fjärrkontrollen kan användas för att slå på och av strömmen as länge indikatorn STAND BY lyser.

Virtanäppäimen (POWER) valmiustila (STANDBY)

Kun laitteen verkkojohto on liitetty pistorasiaan, valmiustilan merkkivalo syttyy riippumatta virtanäppäimen (POWER) asennosta (ON / OFF).
Merkkivalo osoittaa, että laitteessa on hieman virtaa muistin sisältöjen ylläpitoa varten. Tätä tilaa kutsutaan valmiustilaksi. Kun valmiustilan merkkivalo (STAND BY) palaa, laitteen virta voidaan kytkeä ja katkaista kaukosäätimellä.

Afbrydertastens (POWER) STANDBY funktion

Når apparatets strømledning er tilsluttet en stikkontakt, lyser STAND BY indikatoren, uanset om der er tændt ved afbryderen på apparatet eller ej. Det angiver, at apparatet bliver forsynet med en ganske lille mængde strøm til opret-hoidelse af hukommelsens indhold.
Denne funktion kaldes STAND BY. Når STAND BY indikatoren er tændt, kan strømmen til apparatet slås til og fra med fjernsty-ringsenheden.

PÅ/AV-knappens Stand-by funksjon

Når strømledningen til dette anlegget er satt i en vekselstrømskontakt, vil STAND-BY indikatorlampen lyse enten PÅ/AV-knappen er på-eller avslått. Dette betyr at en viss mengde strøm tilføres anlegget slik at innholdet i minnet ikke går tapt.
Denne funksjonen kalles Stand-by. Når indikatorlampen for STAND-BY er tent, kan strømmen slås PÅ / AV fra fjernkontrollen.

The marking of products using lasers (Except for some areas)

CLASS 1 LASER PRODUCT

The label is attached to the rear panel and says that the component uses laser beams that have been classified as Class 1. It means that the unit is utilizing laser beams that are of a weaker class. There is no danger of hazardous radiation outside the unit.

Safety precautions

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
	THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

Contents

Caution: Read the pages marked ⚠ carefully to ensure safe operation.

Before applying power

⚠ Before applying power 2
⚠ Safety precautions 2

Special feature 3
System connections 4
Controls and indicators 10
Operation of remote control unit 15
Clock adjustment 16
Playing music 17
Adjustment related to volume 18
Playback of CD 20

Playing from first track 20
Playing from desired track 21
Programming tracks in desired order 22
Repeated playback 24

Playback of tape 26

Tape Playback 26
Skip search 28
Dash & play, One-program repeat playback, Rewind playback 29

Broadcast Reception 30

Receiving broadcast stations 30
Station preset 31
RDS (Radio Data System) 32
PTY (Program Type Identification) search 33
AF (Alternative Frequency) search 34

Recording 35

Preparation for recording 35
Recording 36

CCRS recording 38

Fade edit recording 39
Program edit recording 40

Timer operation 42

Timer program reservation 42
Sleep timer reservation 45

Maintenance 46
In case of difficulty 48
⚠ ***Specifications*** 51

Special features

In spite of the appearance of a mini component system, the internal circuitry of each component in this system has been designed to provide equivalent sound quality to standalone component products.

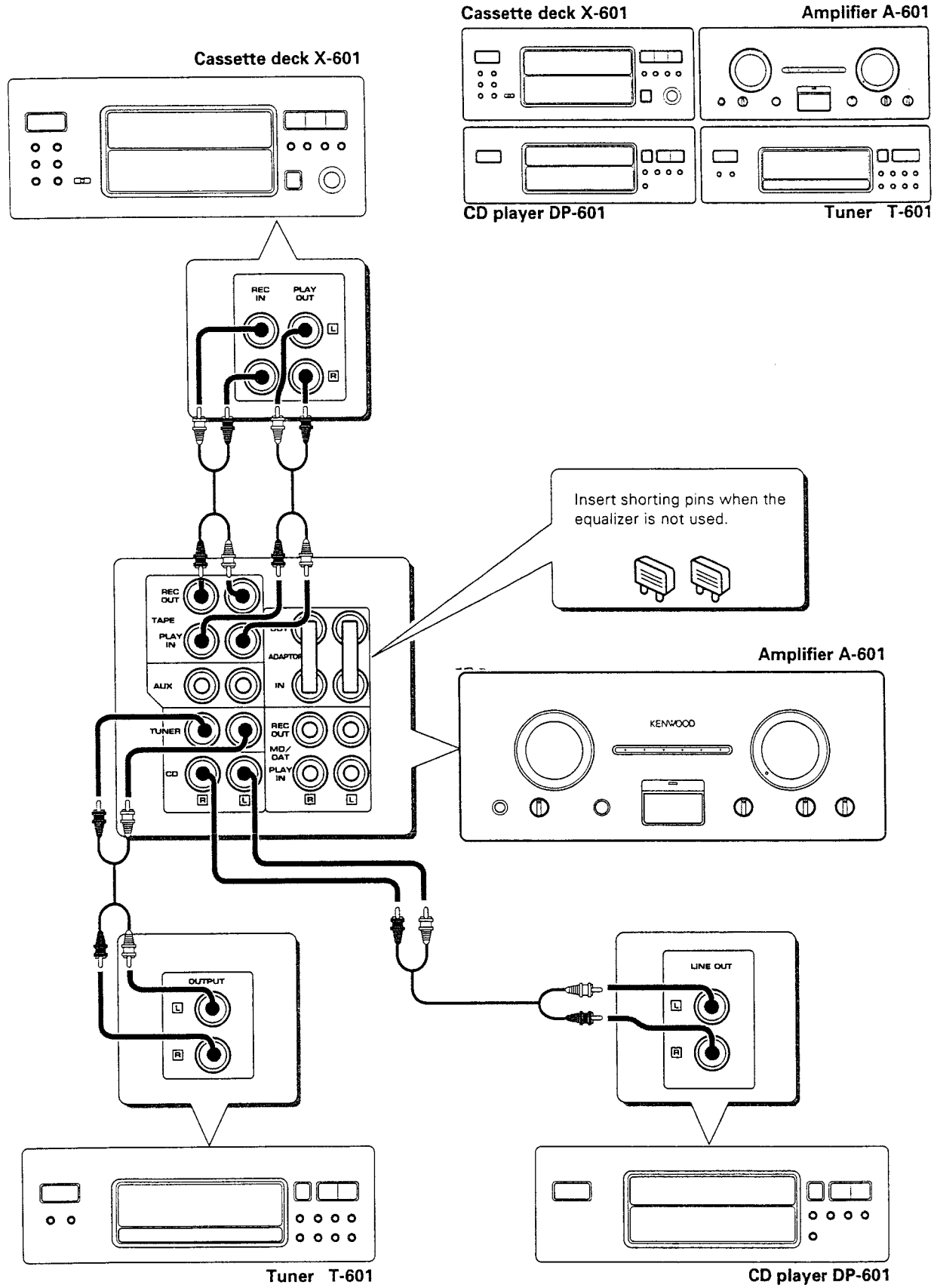
❶ The front panels use extruded aluminum material and the high-rigidity chassis have a thickness of 1.6 mm to increase the strength for an improved sound quality.
❷ The power circuit block which is specially important for the sound quality has been reinforced.
❸ Every small component has been specially selected taking the sound quality improvement into consideration.

The system provides both a high operability and functional versatility.

❶ CD DIRECT function is provided to allow listening to CD sound with high quality.
❷ Programmed playback of CD is provided to play desired tracks in a desired order.
❸ Up to 39 radio stations can be preset and recalled easily.
❹ RDS (Radio Data System) broadcasting can be received. This allows PTY search, AF search, PS display and RT display.
❺ DPSS function makes the cassette deck capable of various playback functions like a CD player.
❻ CCRS records CD with high sound quality by a simple operation.
❼ Clock function is built-in to allow timer playback and timer recording.
❽ Remote control unit is provided to operate the basic functions of the system components.

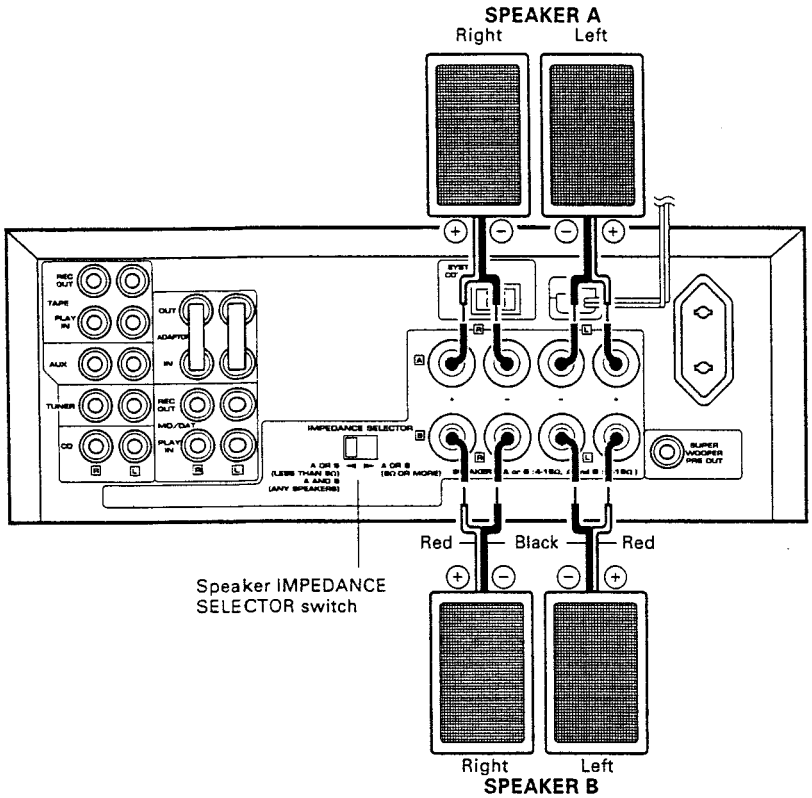
System connections

Make connections as shown below. When connecting the related system components, refer also to the instruction manuals of the related components.
Do not plug in the power lead until all connections are completed.

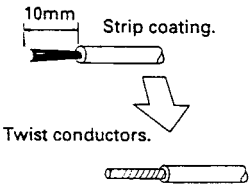


Notes
1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.

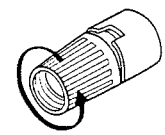
Connect the speakers as shown in the figure, paying attention that the core wires do not come into contact with other terminals.



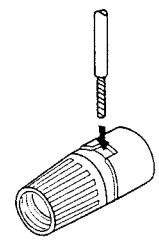
① **Prepare the cord.**



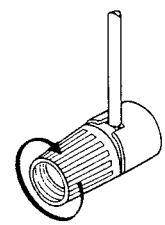
② **Loosen.**



③ **Insert.**

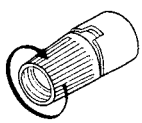


④ **Secure.**

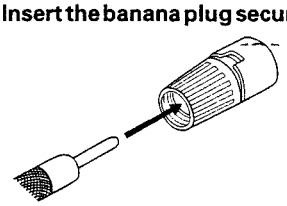


Connection of banana plugs (Except for Sweden, Norway, Finland, Denmark and Switzerland)

① **Secure the speaker terminal.**



② **Insert the banana plug securely.**



- Sound will not be heard if the speaker terminal is not fully secured.

- When using both speakers A and B, use speakers with an impedance of 8 ohms or more.
- Never short-circuit the + and – speaker cords.
- If the left and right speakers are connected inversely or if the speaker cords are connected with reversed polarity, the sound becomes unnatural with ambiguous acoustic image positioning. Be sure to connect the speakers and speaker cords correctly.

Setting the speaker IMPEDANCE SELECTOR

CAUTION : TO PREVENT FIRE OR DAMAGE REQUIRING SERVICE, SET THE IMPEDANCE SELECTOR SWITCH AS DESCRIBED BELOW.

When using the speaker A or speaker B separately

Speaker impedance	Selector position
4Ω, 6Ω	A OR B (LESS THAN 8Ω) A AND B (ANY SPEAKERS)
8Ω, 16Ω	A OR B (8Ω OR MORE)

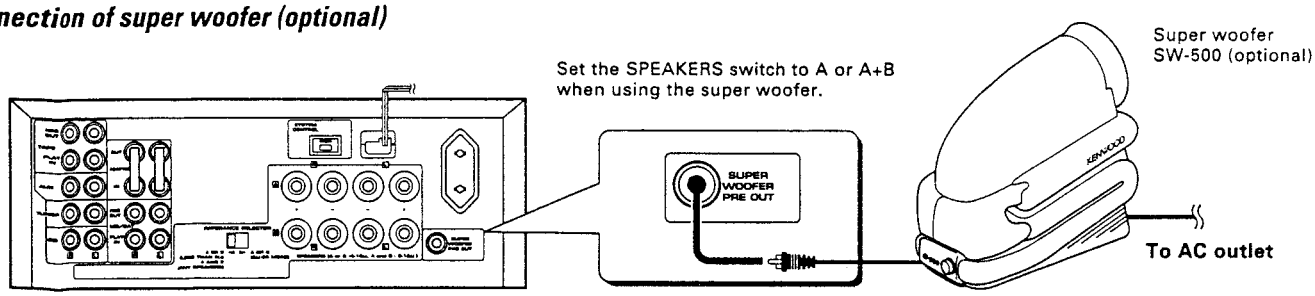
When using the speaker A and B simultaneously

Speaker impedance	Selector position
8Ω, 16Ω	A OR B (LESS THAN 8Ω) A AND B (ANY SPEAKERS)

According to the impedance of the speakers used, set the speaker **IMPEDANCE SELECTOR** on the rear panel as shown in the table.

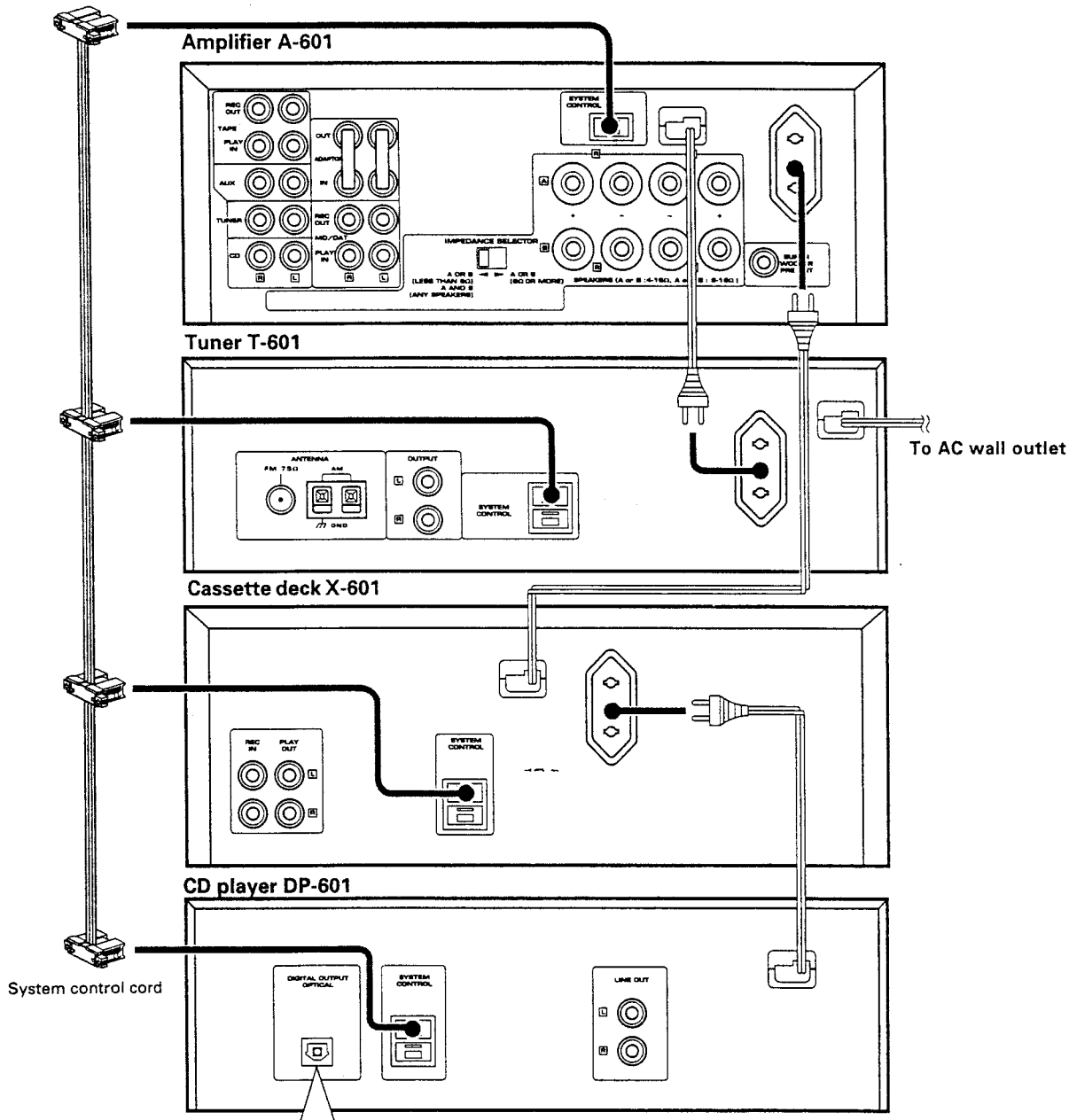
- When the **IMPEDANCE SELECTOR** switch is set to **"A OR B (LESS THAN 8Ω), A AND B (ANY SPEAKERS)"**, it is possible to use the A and B speakers at the same time.
  Therefore, when using the speakers A and B simultaneously, be sure to set the **IMPEDANCE SELECTOR** switch to the **"A OR B (LESS THAN 8Ω), A AND B (ANY SPEAKERS)"** position.
- During speaker system connection and operation of the speaker **IMPEDANCE SELECTOR**, set the power key to OFF.

Connection of super woofer (optional)


Set the SPEAKERS switch to A or A+B when using the super woofer.
SUPER WOOFER PRE OUT
Super woofer SW-500 (optional)
To AC outlet

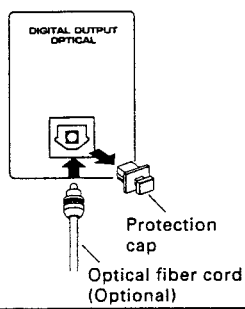
Connection of system control cords and power cords

Connect the system control cords and power cords as shown in the diagram below. For details, refer to the connection diagram in the attached leaflet.



Digital output connector

Remove the protection cap before using the DIGITAL OUTPUT connector.



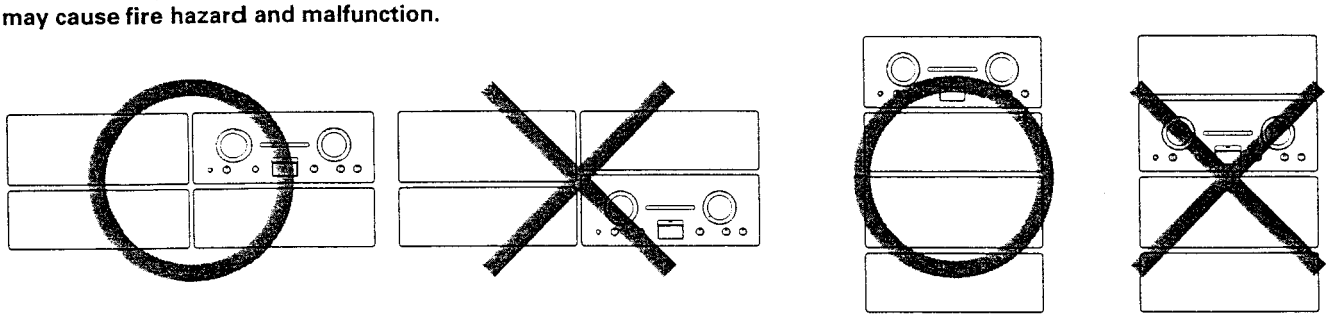
Note on AC OUTLET

Unit destination	Shape of the AC outlet
U.K.	
Europe	

Notes
1. Connect all cords firmly. If connections are loose, there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.

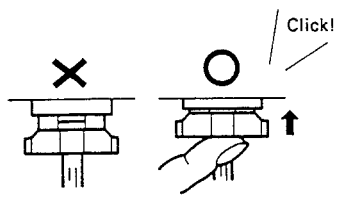
CAUTION

When stacking components, place the amplifier(A-601) on very top of the others. Placing the other components on the amplifier may cause fire hazard and malfunction.



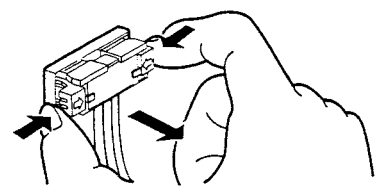
Connection of system control cord

Plugging the connector



Insert the plug straight into the connector until it locks.

Unplugging the connector



While pushing the two sides of connector in, pull it straight out.

Input selection on the amplifier and easy operation function

When one of the input source (TAPE, TUNER, CD, etc.) of the amplifier is selected ,the selected source component starts to play automatically. Inversely, playing a source component switches the input selection of the amplifier automatically.
These operations are also possible from the remote control unit. When the power of the system is turned ON, the source which has been played the last time the power is turned OFF is played automatically (TUNER, CD, etc.).

Note on connection of optical-fiber cable

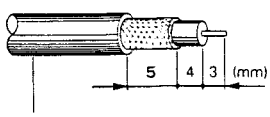
This cable is for use in connection with the DM-1001 MD recorder (optional). The digital signal transmission through the cable allows recording without spoiling the high sound quality of CD. A connection to an amplifier equipped with the digital input connector (for optical fiber) is also possible.

- Insert the optical-fiber cable straight into the connector until it clicks.
- Be sure to attach the protection cap when the connector is not used.
- Never bend or bundle the optical-fiber cable.
- All of the optical-fiber cables sold in audio stores cannot always be used. If the cable you purchased cannot be connected to this unit, please consult your dealer or KENWOOD distributor.

Connection of antenna adapter

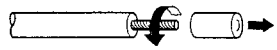
① Strip the cable coating.

Coaxial cable



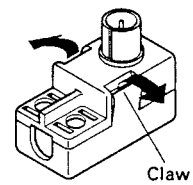
RG-6 (5C-2V) or RG-59 (3C-2V)

Provided simplified antenna



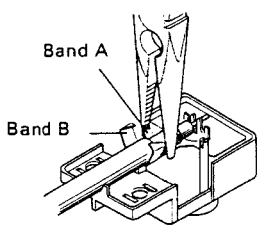
Strip the vinyl coating and twist conductors.

② Open the cover.



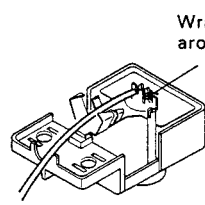
③ Attach the cable and close the cover.

Coaxial cable



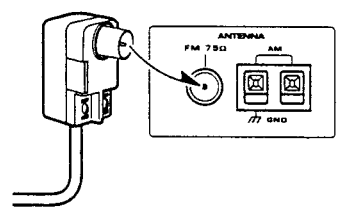
- Insert the tip of the coaxial cable conductor into the slit of the hardware and secure bands A and B using a pair of pliers.

Provided simplified antenna

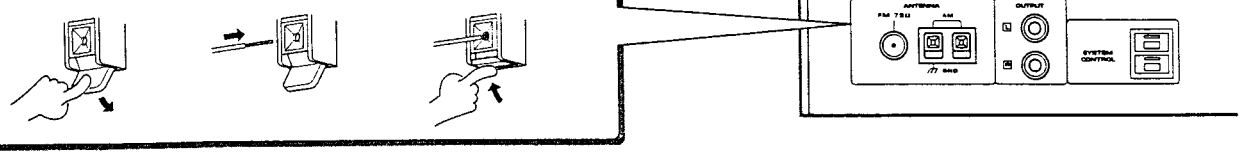


- Insert the cord tip into the slit of the hardware and wrap the conductor around the hardware.

④ Plug into the ANTENNA jack.



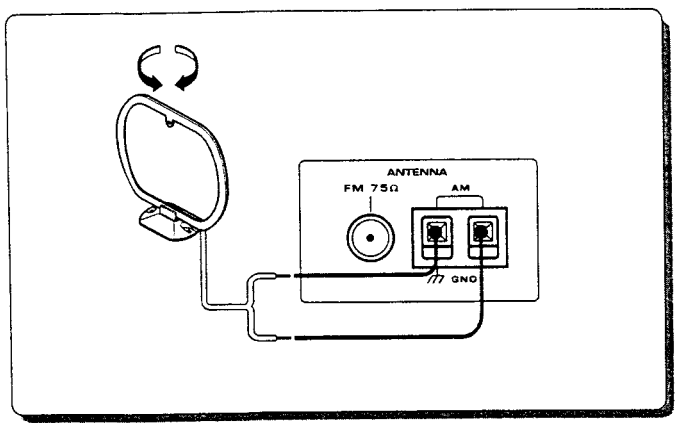
Connection method to each antenna terminal
① Push lever. ② Insert cord. ③ Return lever.



Connection of AM antenna

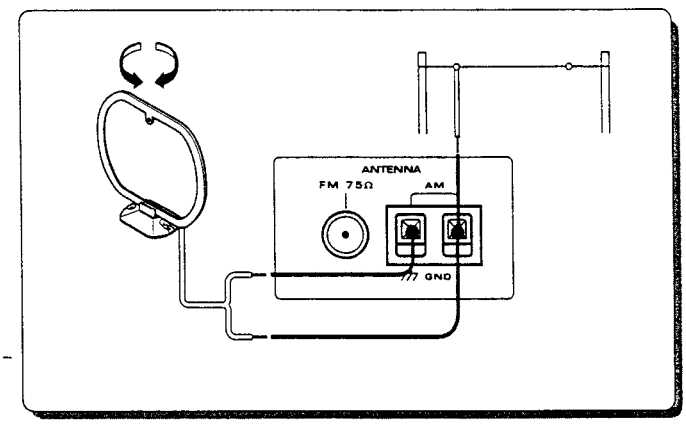
AM loop antenna connection

The supplied antenna is for indoor use. Place it as far as possible from the main system, TV set, speaker cords and power cord, and set it to a direction which provides the best reception.



AM outdoor antenna connection

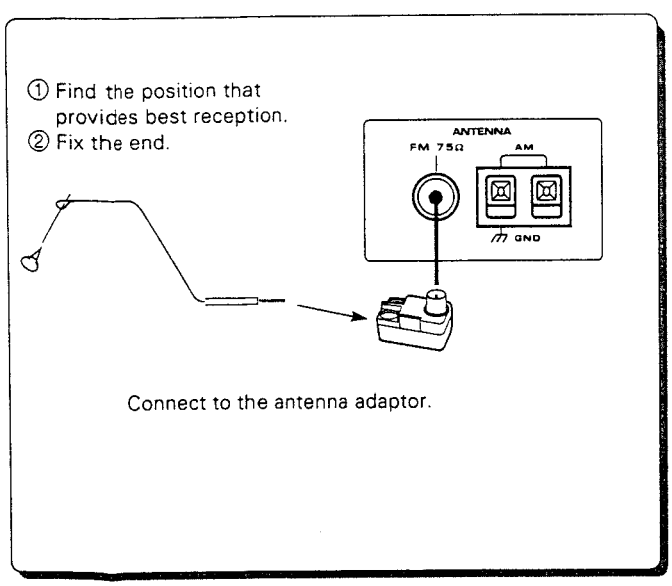
If the reception is poor when the AM loop antenna is used, distribute a vinyl-coated wire of more than 6 meters outdoors, without disconnecting the loop antenna.



Connection of FM antenna

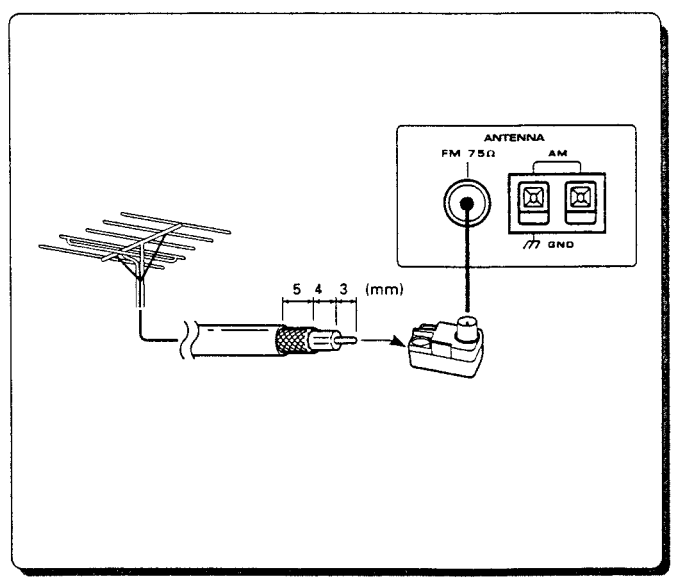
FM indoor antenna connection

The supplied antenna is for indoor use. For stable reception, remove the indoor antenna after installing an outdoor antenna as soon as possible.



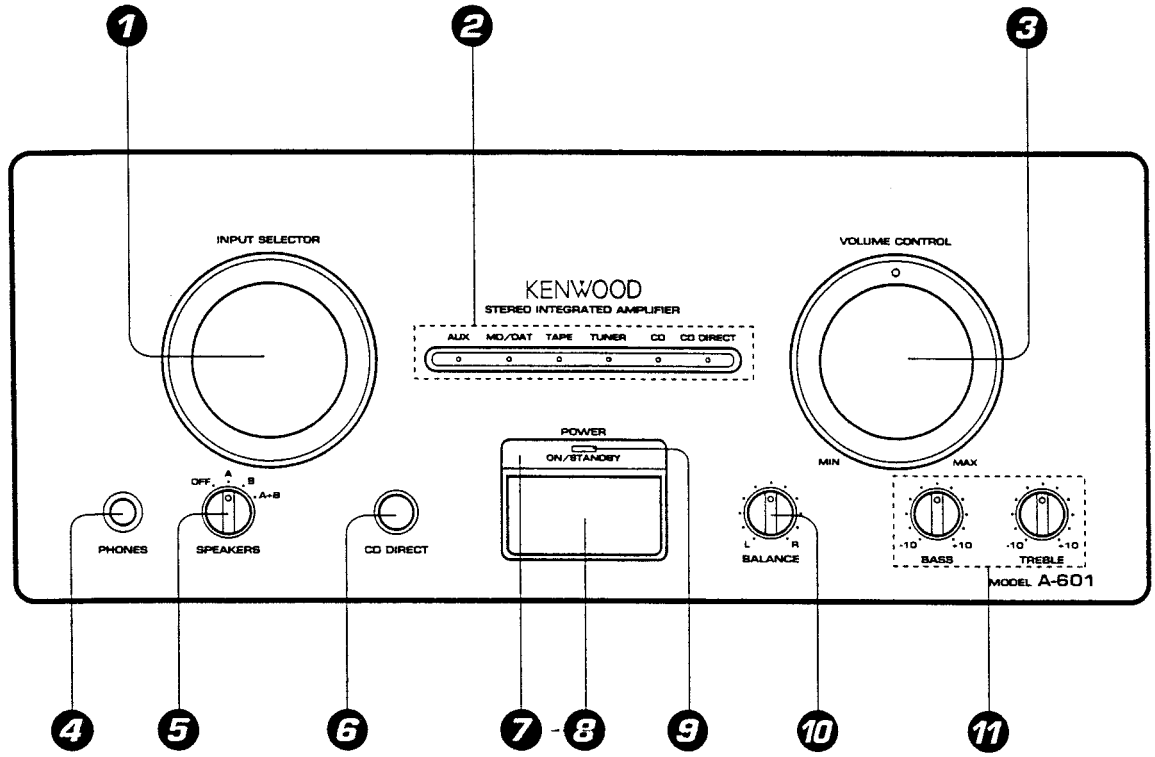
FM outdoor antenna connection

It is recommended to install an exclusive FM outdoor antenna to capture FM broadcast with high sound quality. Use a coaxial cable for the connection between the outdoor antenna and FM ANTENNA terminal on the rear panel. For the connection between the coaxial cable and FM ANTENNA terminal, please refer to the illustration.



Controls and indicators

Amplifier



❶ **Input selector control knob** –17
Rotate to switch the inputs.

❷ **Input indicators** –17
The indicator of the source selected with the input selector lights.

❸ **VOLUME CONTROL knob** –17
Rotate to adjust the volume.

❹ **PHONES jack** –19
Insert the headphone plug.

❺ **SPEAKERS switch** –17
Select the speakers to be listened to.

❻ **CD DIRECT key** –19
Press to play a CD with even higher sound quality.

❼ **Remote sensor**
For remote control operations, point the remote control unit to here.

❽ **POWER key**

❾ **ON/STAND BY indicator**

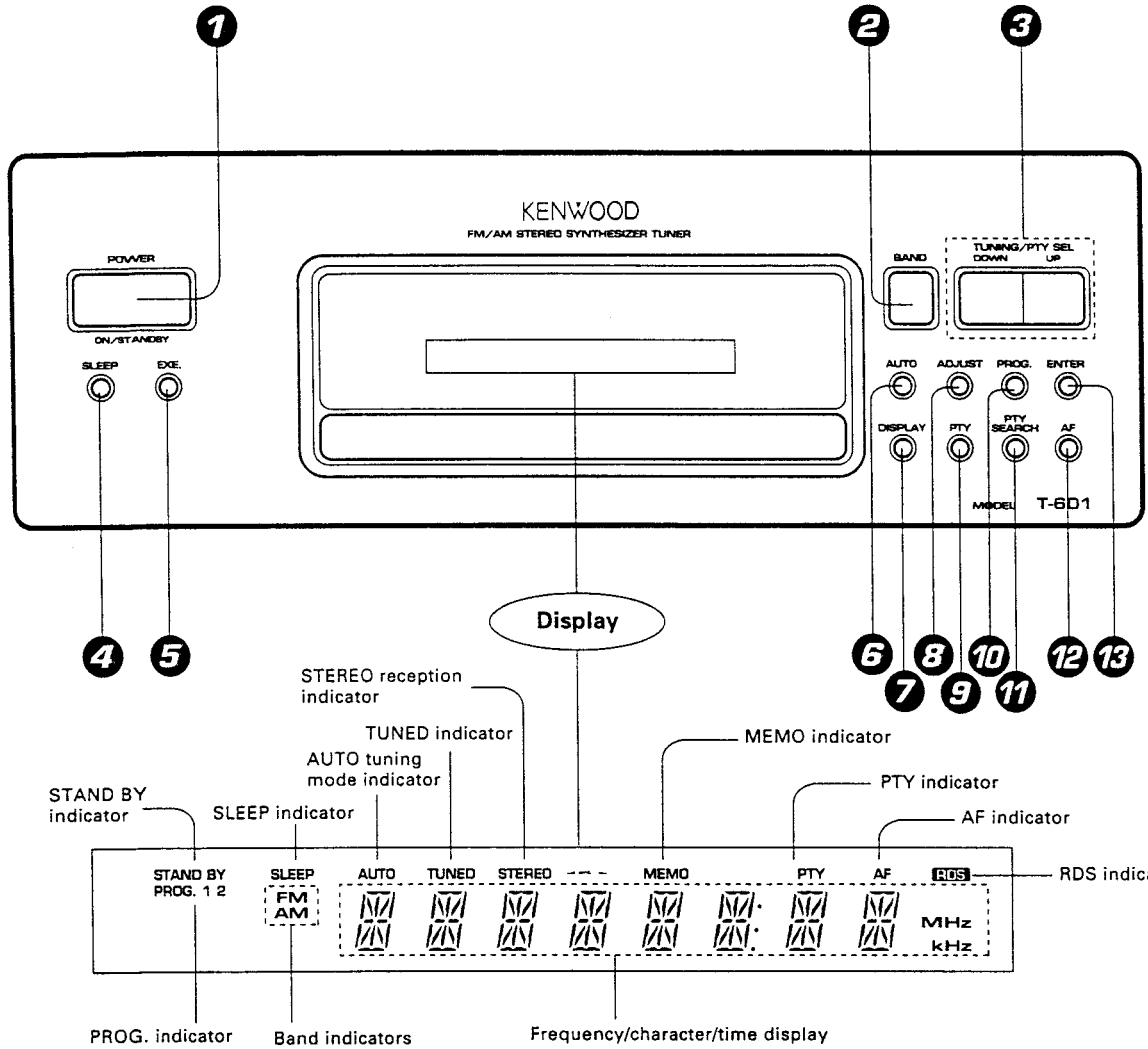
❿ **BALANCE control** –18
Rotate to adjust the balance between the left and right channels.

⓫ **BASS/TREBLE controls** –18
Rotate to adjust the tone.

Standby mode of POWER switch

When the power cord of this unit is plugged into an AC outlet, the STANDBY indicator lights regardless of the power ON/OFF setting. This is because, even when the power is set to OFF, a small amount of power is supplied to the unit to back up the memory. This status is called the standby mode of the unit. While the STANDBY indicator is lit, the power can also be turned ON/OFF from the remote control unit.

Tuner



❶ POWER key

❷ BAND key →30
Press to select the tuning band.

❸ TUNING/PTY SEL control keys →30
Select the station to be received.
This control is also used to select the desired programme type of RDS.

❹ SLEEP key →45
Press to activate the sleep timer.

❺ EXE. key →42
Press to reserve the execution of a timer

❻ AUTO key →30
Each press switches the tuning mode to AUTO and manual alternately.

❼ DISPLAY key →32
Press to change the display contents.

❽ ADJUST key →16
Press to adjust the time of day, etc.

❾ PTY key →33

❿ PROG. key →42

⓫ PTY SEARCH key →33

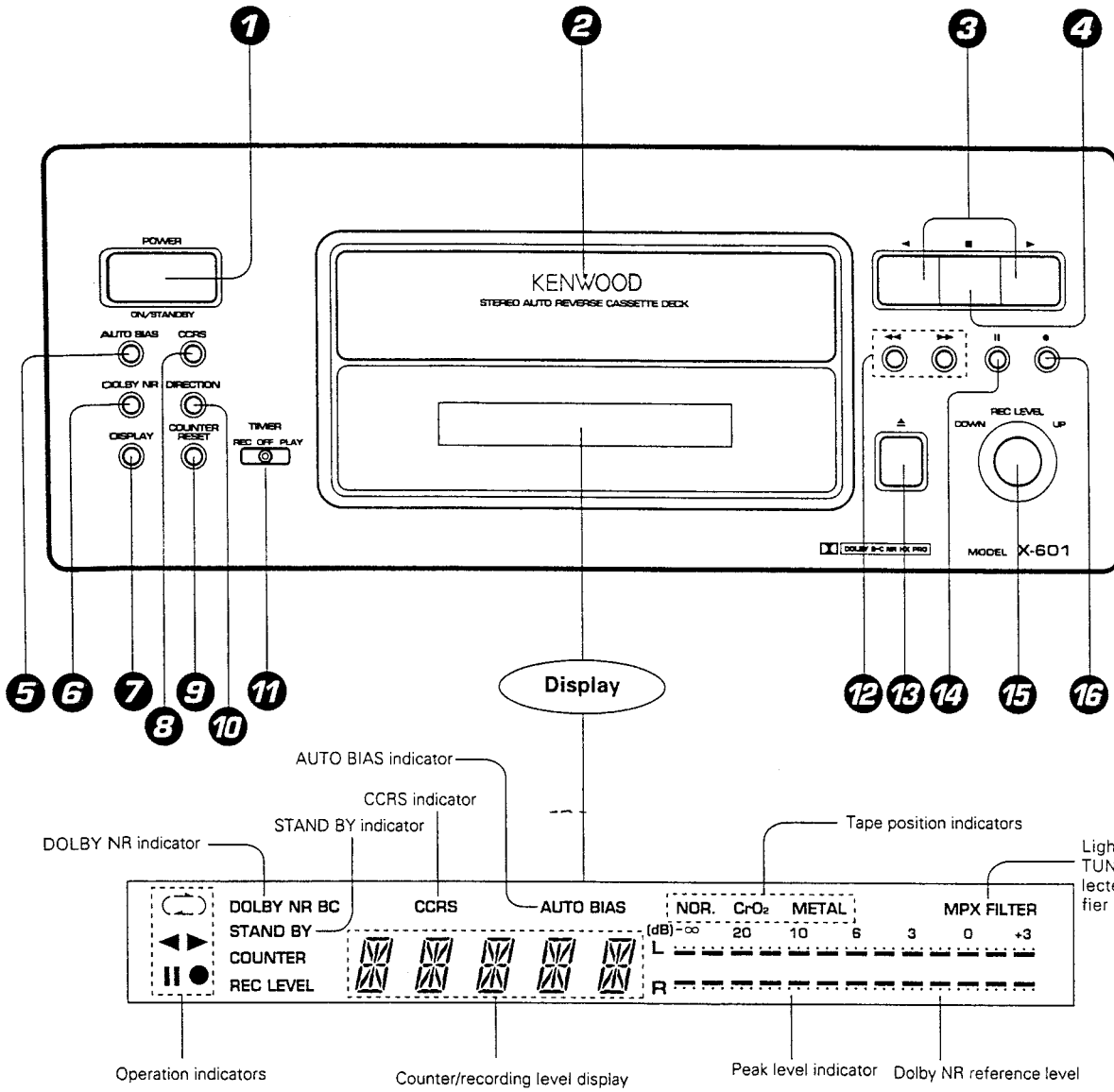
⓬ AF key →34

⓭ ENTER key

Standby mode of POWER switch

When the power cord of this unit is plugged into an AC outlet, the STAND BY indicator lights when the power is OFF. This is because, even when the power is set to OFF, a small amount of power is supplied to the unit to back up the memory. This status is called the standby mode of the unit.

Cassette deck



❶ **POWER key**

❷ **Tape tray**

❸ **Play key (◄, ►)**

❹ **Stop key (■)**

❺ **AUTO BIAS key** →36
Press to set the recording bias of tape automatically.

❻ **DOLBY NR key**
Each press of the key switches the Dolby NR mode to B → C → off.

❼ **DISPLAY key**
Press to switch the display contents to the counter and to the recording level.

❽ **CCRS key** →38
When this key is pressed, recording starts after setting the optimum recording level of CD and the optimum recording bias of tape automatically.

❾ **Counter reset key.**
Press to reset the counter reading to "0000".

❿ **DIRECTION key** →26
Press to change the tape transport direction.

⓫ **TIMER switch**

⓬ **Fast winding keys (◄◄,►►)**

⓭ **Open/close key (≜)**

⓮ **Pause key (II)**

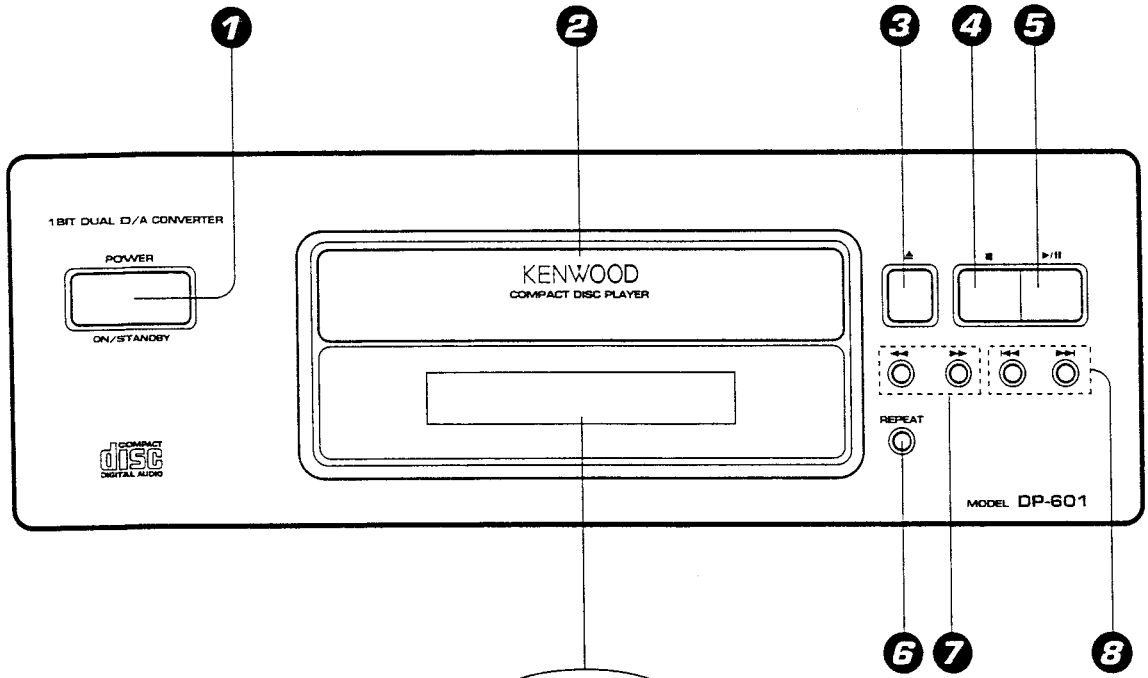
⓯ **Recording level control**

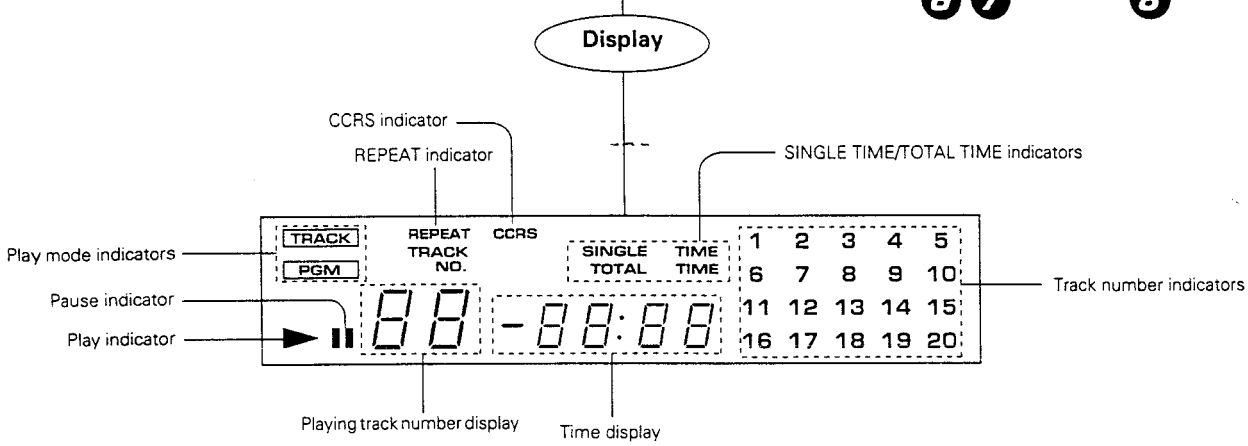
⓰ **Record key (●)**

Standby mode of POWER switch

When the power cord of this unit is plugged into an AC outlet, the STAND BY indicator lights even when the power is not ON. This is because a small amount of power is supplied to the unit even when the power is OFF. This status is called the standby mode of the unit.

CD player





❶ **POWER key**

❷ **Disc tray**

❸ **Tray open/close key (⏏)**

❹ **Stop key (■)**

❺ **Play/pause key (►/II)**

❻ **REPEAT key** –24
Press for repeated playback.

❼ **Search keys (◄◄,►►)** –21
Press to move the played position at high speed in forward or reverse direction.

❽ **Skip keys (|◄◄,►►|)** –21
Press to skip to the beginning of a track.

Standby mode of POWER switch

When the power cord of this unit is plugged into an AC outlet, a small amount of power is supplied to the unit even when the power is OFF. This status is called the standby mode of the unit.

Remote control unit

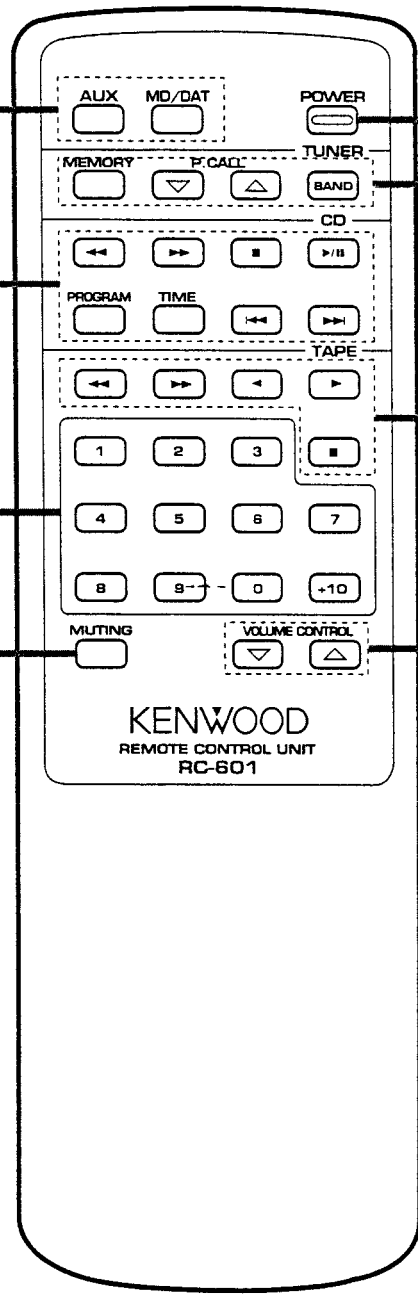
When the amplifier is connected with the T-601 tuner, DP-601 CD player, X-601 cassette deck through system control cords, these components can be operated from the remote control unit provided with this system.

Input selector keys
Press either key when listening to the MD recorder or an auxiliary input source.

CD player operation keys
⏮ and ⏭ keys, ■ key, ▶/II key, ◀◀ and ▶▶ keys, **PROGRAM** key, **TIME** key

Numeric keys
Function as the numeric keys of the CD player when the **CD** input is selected.
Function as the numeric keys of the tuner when the **TUNER** input is selected.
Function as the numeric keys of the MD recorder when the **MD** input is selected.

MUTING key
Press to mute the sound temporarily.



POWER key

Tuner operation keys
BAND key, **P.CALL** ▽ and △ keys, **MEMORY** key

Cassette deck operation keys

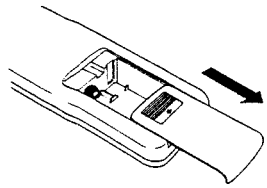
VOLUME CONTROL keys
Press these keys to adjust the volume. When these keys are pressed, the **VOLUME CONTROL** knob on the main unit rotates and the STANDBY indicator blinks at high speed.

Model: RC-601
Infrared ray system

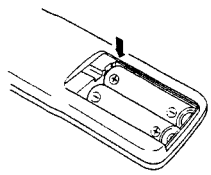
Operation of remote control unit

Loading batteries

1 *Open the cover.*

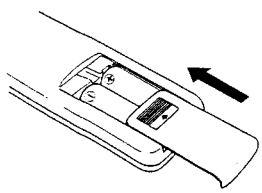


2 *Insert batteries.*



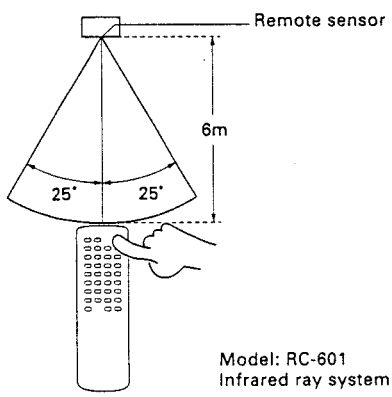
- Insert two (R6/AA) batteries following the polarity indications.

3 *Close the cover.*



Operation

After plugging the power cord of the amplifier, press the POWER key of the remote control unit to turn the power of the amplifier ON. When the power is turned ON, press the key of the function to be operated.



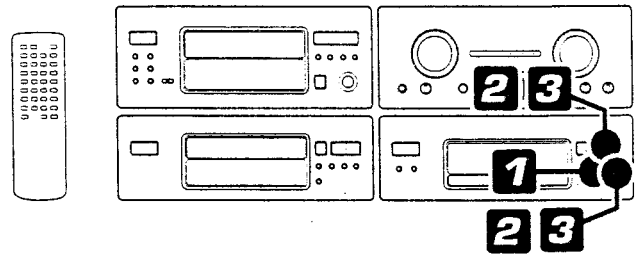
Operating range (approx.)

- When pressing more than one remote control keys successively, press the keys securely by leaving an interval of 1 second or more between keys.

Notes
1. The provided batteries are intended for use in operation checking, and their service life may be short.
2. When the remote controllable distance becomes short, replace both of the batteries with new ones.
3. If direct sunlight or the light of a high-frequency fluorescent lamp (inverter type, etc.) is incident to the remote sensor, malfunction may occur. In such a case, change the installation position to avoid malfunction.

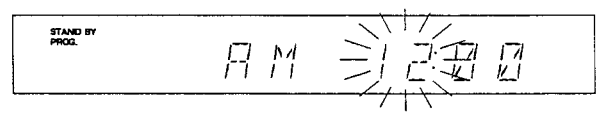
Clock adjustment

This unit incorporates a clock function. Be sure to adjust the correct time before using the timer function.



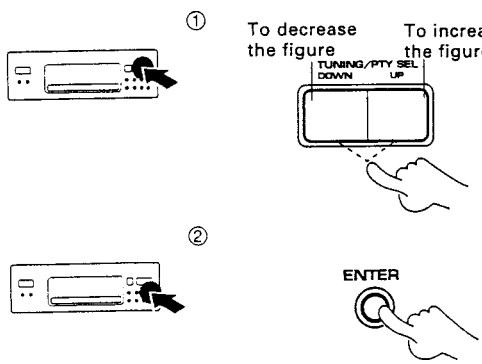
1 *Activate the clock adjustment mode.*

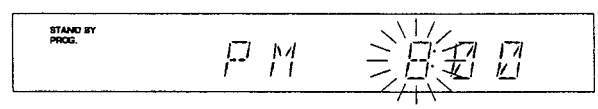
Example: Adjustment to 8:45PM (20:45)



- The time display starts to blink.

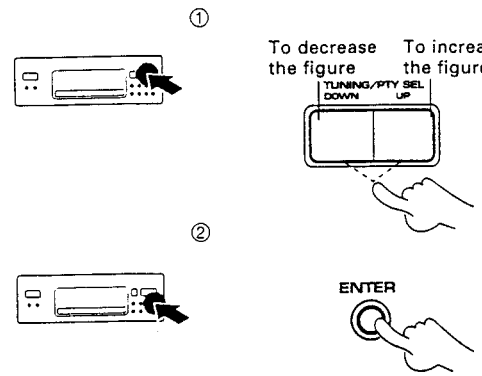
2 *Enter the hours.*

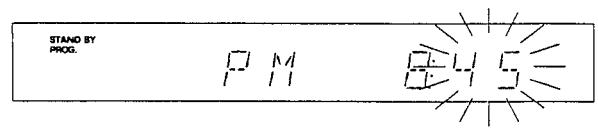




- The time of the day is represented in 12-hour AM/PM method.
- Press the **ENTER** key. The hour is entered and the minute display starts to blink.

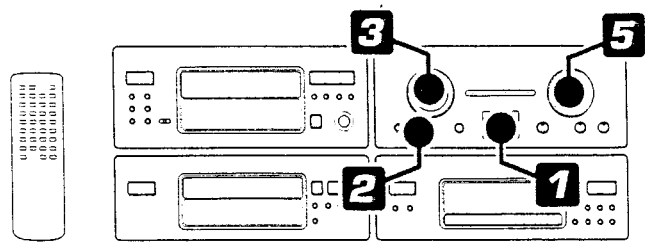
3 *Enter the minutes.*





- If you make a mistake, restart from the beginning.
- To adjust correct time, press the **ENTER** key at the same moment as a time announcement.
- The time display blinks after a power failure or when the power cord has been unplugged from the AC outlet and plugged again. In such a case, adjust the clock again.

Playing music



Normal play

1 Turn the power ON.

- If the components are connected as shown in the connection diagram on page 6, all of the components will be turned ON.

2 Select the SPEAKERS switch position.

OFF
No sound is output from the speakers. Set to this position when listening through headphones, etc.

A
Sound is output only from the speakers connected to the SPEAKERS A terminals on the rear panel.

B
Sound is output only from the speakers connected to the SPEAKERS B terminals on the rear panel.

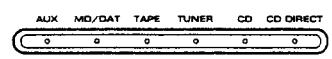
A+B
Sound is output simultaneously from the speakers connected to the SPEAKERS A and SPEAKER B terminals on the rear panel.

- The super woofer can be used when the switch is set to A or A+B.

3 Select the source to be played.

Rotating the knob changes the inputs as follows:

TUNER ⟷ CD ⟷ AUX
TAPE ⟷ MD/DAT



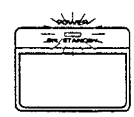
- The indicator of the selected source lights.

4 Play the source component.

5 Adjust the volume.

To increase volume

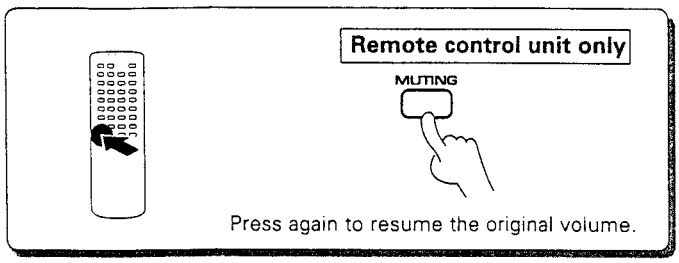
Blinks.



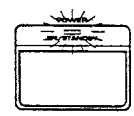
- When the volume is adjusted with the remote control unit, the **STANDBY** indicator blinks and the **VOLUME CONTROL** rotates while a key is pressed.

Adjustments related to volume

Muting sound temporarily

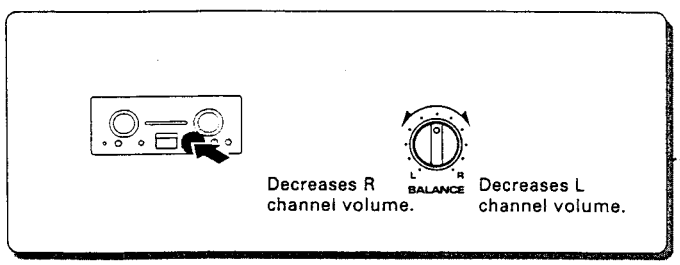


Blinks.

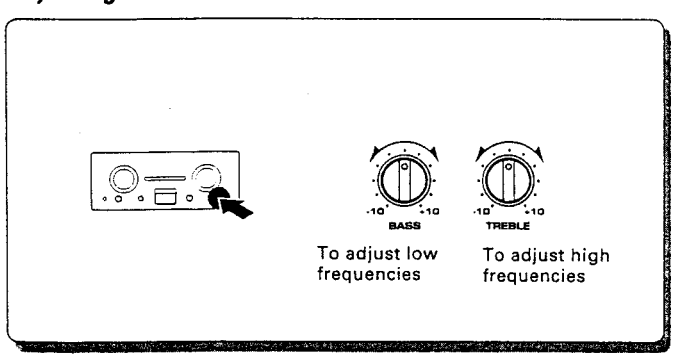


- The STANDBY indicator blinks and the sound is muted.

Adjusting the left and right volume balance

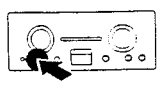


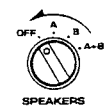
Adjusting the tone



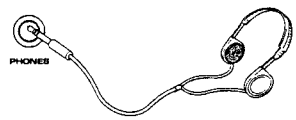
Listening through headphones

①**Set the SPEAKERS switch to off.**

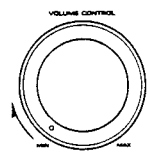




②**Insert the headphone plug into the PHONES jack.**



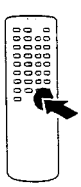
③**Adjust the volume.**

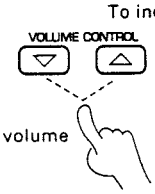


To increase volume

Main unit

To increase volume



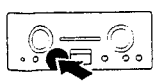


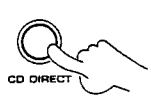
To decrease volume

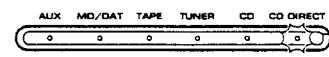
Remote control unit

Reproducing CD with higher sound quality

To play CD with even higher sound quality, this function makes the signals by-pass unnecessary circuitry.







Lights.

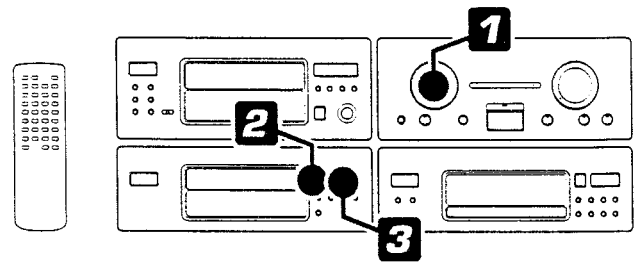
- When **CD DIRECT** is ON (indicated by the lighting of the CD DIRECT indicator), tone control, balance control and graphic equalizer (optional) are invalid.
- The **CD DIRECT** function is given the first priority, regardless of the source selected with the input selector.

To cancel CD DIRECT:

Press the CD DIRECT key again.

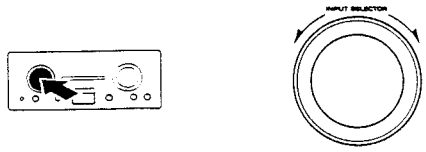
Playback of CD

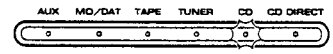
Use the following procedure to play a CD following the original order of tracks.



Playing from first track

1 Select the CD input on the amplifier.





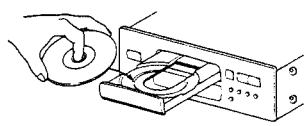
- The CD input indicators of the amplifier lights.
- The amplifier can also be set to the CD input by pressing the ▶/II key of the remote control unit.

2 Load a disc.

① Open the tray.

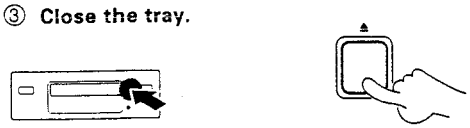
② Place a disc.

Label side facing up



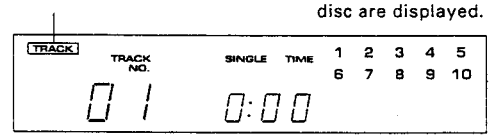
- Do not touch the playing side of disc.
- Load only one disc at a time.

③ Close the tray.



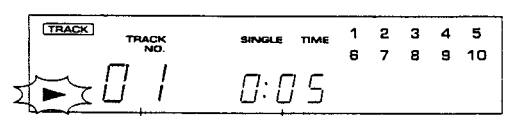
Check that the TRACK indicator is lit.

Track numbers on the disc are displayed.



3 Start playback.

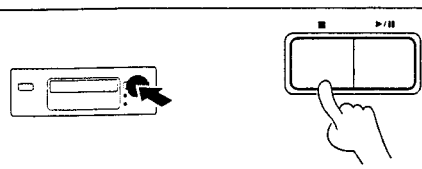
- In a few seconds, playback starts from track No. 1.



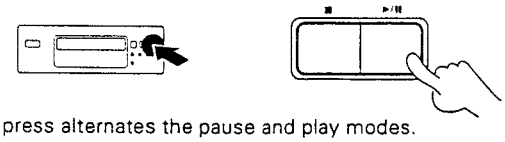
Track No. being played

Elapsed time of track being played

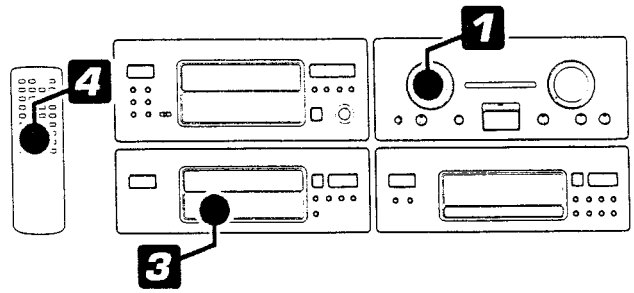
To stop playback:



To pause playback temporarily:

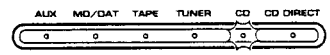


Each press alternates the pause and play modes.



Playing from desired track

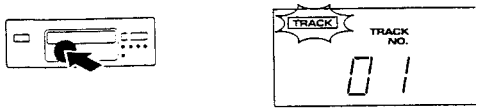
1 Select the CD input on the amplifier.



- The CD input indicators of the amplifier lights.
- The amplifier can also be set to the CD input by pressing the ▶/II key of the remote control unit.

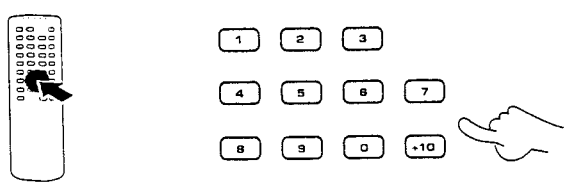
2 Load a disc.

3 Check that the TRACK indicator is lit.



- If the **PGM** indicator is lit, press the **PROGRAM** key of the remote control unit that the **TRACK** indicator lights.

4 Select the desired track number.



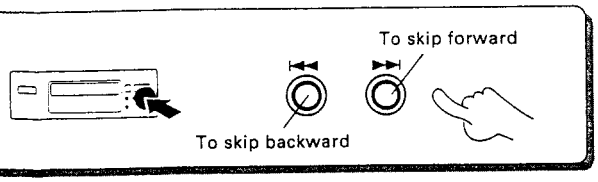
Press the numeric keys as shown below....

To enter track No. 23 : +10 +10 3

To select track No. 40 : +10 +10 +10 +10 0

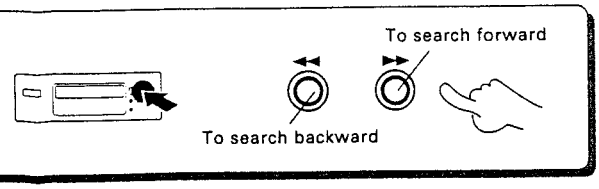
- Playback starts from the selected track and continues on the subsequent tracks.
- If a track number which does not exist on the disc is selected while the disc tray is open, the last track on the disc will be played.
- Once the tray has been closed or playback has started, a track number which does not exist on the disc cannot be selected.

To skip to another track:



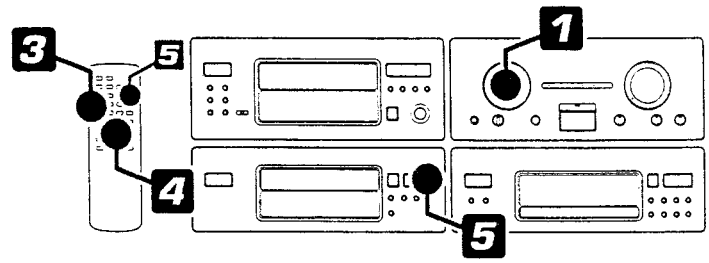
- The track in the direction of the pressed button is skipped, and the selected track will be played from the beginning.
- When the ⏮ key is pressed once during playback, the track being played will be played from the beginning.

To move played position at high speed (search):



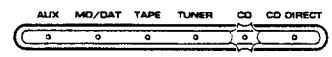
- Holding the key depressed increase the search speed further.
- Playback starts from the position where the key is released.

Up to 32 desired tracks can be programmed in the desired order.



Programming tracks in desired order

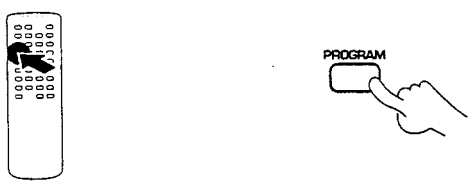
1 Select the CD input on the amplifier.



- The CD input indicators of the amplifier lights.
- The amplifier can also be set to the CD input by pressing the ▶/II key of the remote control unit.

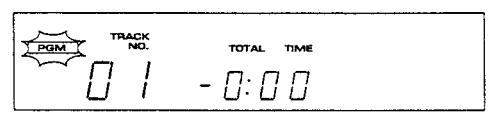
2 Load a disc.

3 Activate the PGM mode.

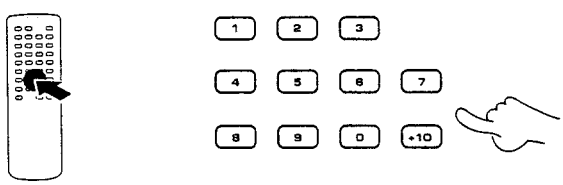


Lights.

"SINGLE TIME" changes to "TOTAL TIME".



4 Enter track numbers in the order you want to play them.



Press the numeric keys as shown below....
To enter track Nos. 2, 5 and 25:
2 5 +10 +10 5

Displays the entered track No. for a few seconds.

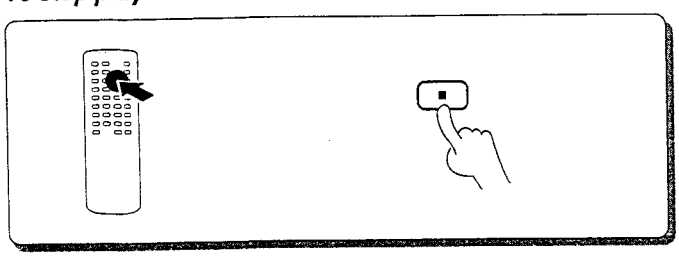
Displays the total playing time of the programmed tracks.

- Up to 32 tracks can be programmed. "FULL" is displayed if you attempt to program a 33st track.
- It is also possible to select tracks by referring to the disc label while the tray is open.
- Once the total playing time of the programmed tracks has exceeded 100 minutes, the remaining time on the disc will not be displayed.

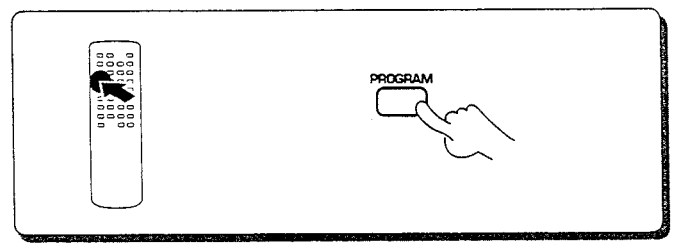
5 Start playback.

- Tracks will be played in the order they were programmed (in order of P numbers).
- When the |◀◀ or ▶▶| key is pressed during playback, the track will be skipped in the direction of the pressed button.

To stop playback:

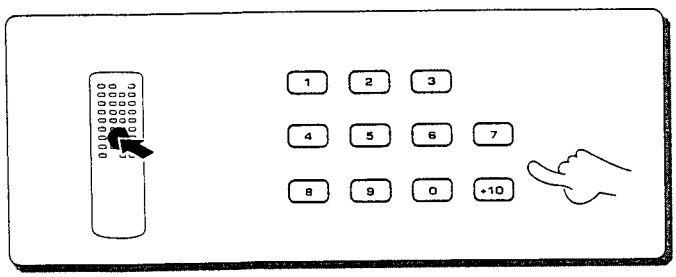


To return to playback in order of track numbers:



- To Playback in the original order of tracks starts with the track being played.

To add a track to the program:



- When a track number is entered, the track will be added to the end of the existing program.

Time display on CD player

Each press of the **TIME** key changes the displayed contents. (On the remote control unit)

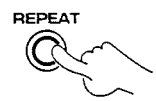
①	SINGLE TIME 1:23	Elapsed time of track being played
②	SINGLE TIME -2:37	Remaining time of track being played
③	TOTAL TIME 23:45	Elapsed time of entire disc
④	TOTAL TIME -36:15	Remaining time on entire disc

Repeated playback

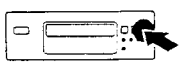
To repeat the entire disc

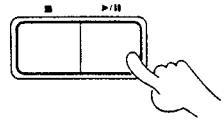
① **Check that the TRACK indicator is lit.**

② **Switch REPEAT ON.**

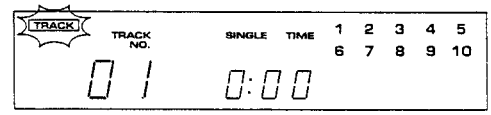


③ **Start playback.**

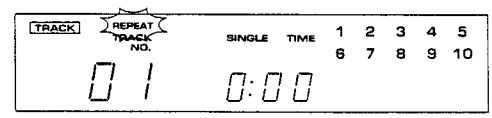




Check the **TRACK** indicator.



Press so that the **REPEAT** indicator lights.



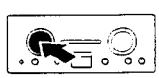
To stop repeated playback:

Press the **REPEAT** key again.

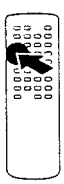
- The **"REPEAT"** indicator goes out and the playback following the current mode of the CD player starts.

To repeat only the programmed tracks

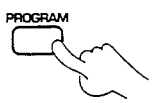
① **Select the CD input.**



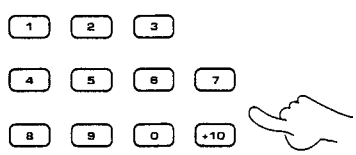
② **Load a disc.**



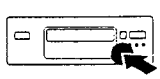
③ **Activate the PGM mode.**

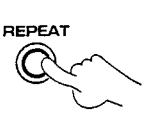


④ **Program desired tracks.**

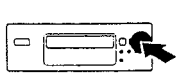


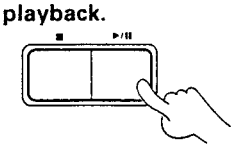
⑤ **Switch REPEAT ON.**



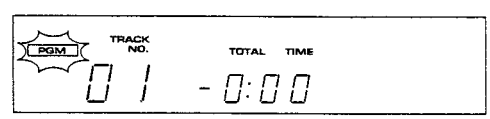


⑥ **Start playback.**



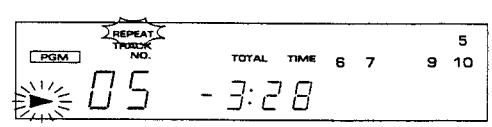


Press so that the **PGM** indicator lights.



- All of the programmed tracks will be repeated.
- In case only one track is programmed, only that track will be repeated.

Press so that the **REPEAT** indicator lights.



To stop repeated playback:

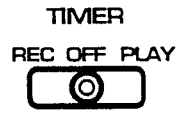
Press the **REPEAT** key again.

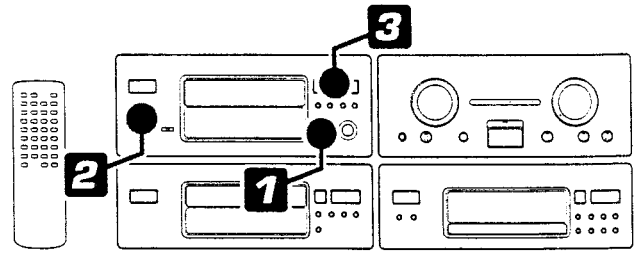
- The **"REPEAT"** indicator goes out and the playback following the current mode of the CD player starts.

Playback of tape

Before playing a tape

Set the TIMER switch to OFF.



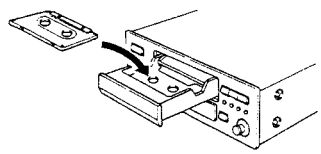


Tape playback

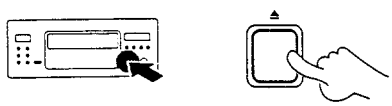
1 *Load a tape.*

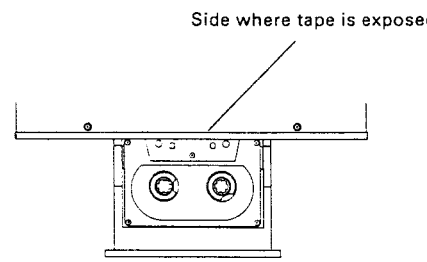
① **Open the tray.**

② **Place a tape.** Side where tape is exposed



③ **Close the tray.**





Tape placed on the tray

- The type of tape, that is, Normal, Chrome or Metal, is set automatically.
- Remove tape slack before loading.

2 *Determine the playback modes.*

①Select the tape transport mode.

②Select the Dolby NR mode.

Each press switches the modes as follows.

DIRECTION key:

① "⇄"... Playback stops after having played a side.
② "⊃" ... Playback stops after having played the two sides.
③ "⇆" ... Endless playback occurs.

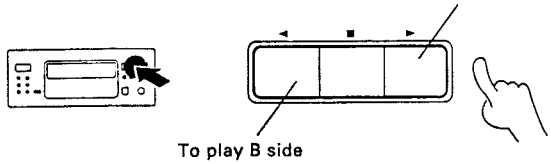
DOLBY NR key:

① DOLBY NR B .... General NR.
② DOLBY NR C .... NR with higher performance.
③ DOLBY NR OFF (no indication) .... Dolby NR is not used.

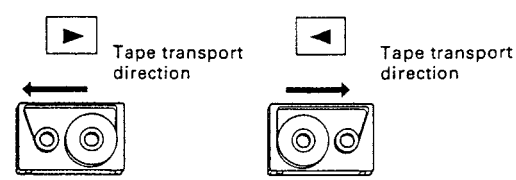
- Select the Dolby NR mode according to the circumstances of tape recording.

3 *Start playback.*

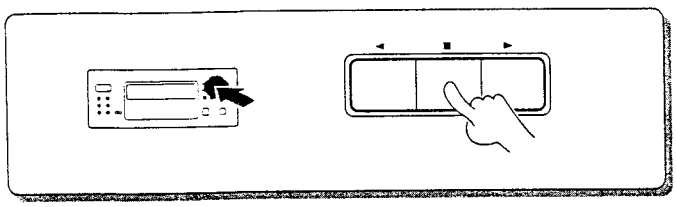
Press the ► or ◄ key. To play A side



Direction of tape is when a tape is set on the tray with its A side facing upward.

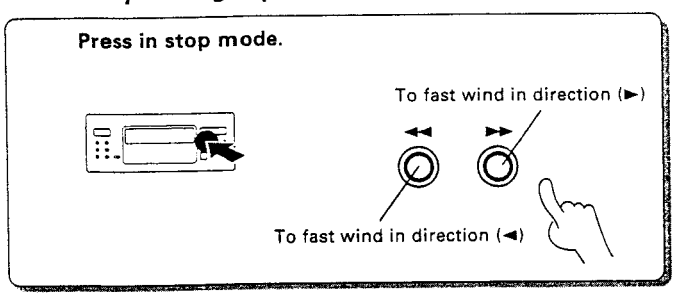


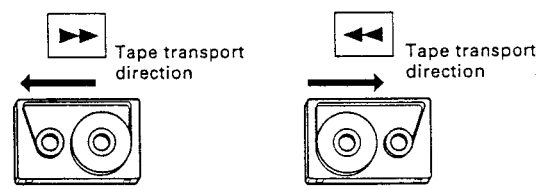
To stop playback:



- Do not press the ⏏ key until the tape has stopped completely.

To wind tape at high speed:





- Press the ■ key to stop fast winding.

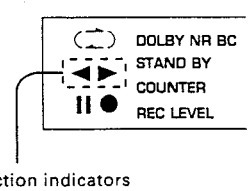
Dolby Noise Reduction (NR)

The Dolby NR system is used to minimize the hiss noise heard when playing tape. The system has the B type and C type, and the same type should be used in recording and playback to obtain the noise reduction effect.
When you record a tape, it is recommended to write the type used, "B" or "C", on the cassette label.

Dolby B NR: Generally-used Dolby NR.
Dolby C NR: Features a higher noise reduction effect than the B type.

Transport direction indicators

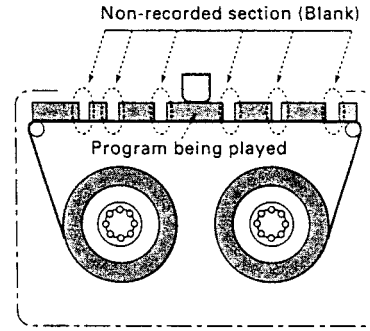
The ◄ and ► indicators indicate the current direction in which the tape advances when playback or recording is started automatically by the easy operation function, etc. This direction is the direction used when the tape was last stopped.
(To change the direction, press the play key for the opposite direction then press the stop key.)



Transport direction indicators

DPSS (Direct Program Search System)

The DPSS is capable of detecting non-recorded sections of more than 4 seconds as "blanks between programs". It can be used in four ways as described below.

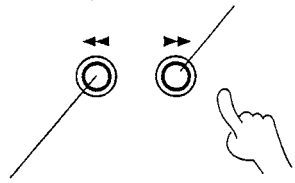


1. **Skip search** : Plays the desired program from the beginning by skipping programs until there. Up to 16 tunes can be skipped in Skip search.
2. **Dash & play** : Plays programs repeatedly by skipping non-recorded sections of more than 10 seconds.
3. **Rewind playback** : Rewinds tape to the beginning and restarts playback from there.
4. **One-program repeat playback** : Plays a single program up to 16 times.

Skip search

During playback of A side (while ► is lit)

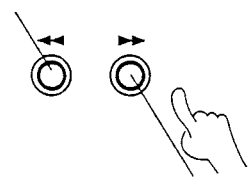
To play the next program: Press once.
To play the 4th program after the current program: Press 4 times.



To return to the beginning of the current program: Press once.
To play the 4th program before the current program: Press 5 times.

During playback of B side (while ◄ is lit)

To play the next program: Press once.
To play the 4th program after the current program: Press 4 times.



To return to the beginning of the current program: Press once.
To play the 4th program before the current program: Press 5 times

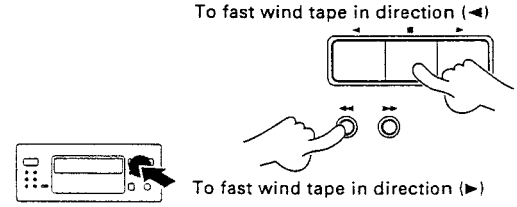
COUNTER RESET key

Before starting recording (playback), it is a good idea to press the **COUNTER RESET** key to set the counter reading to "0000". If you end recording (playback) in the middle of the tape, the memo of the counter reading at that time will serve as the reference in finding that position when starting next recording (playback). With the zero-stop operation, it is also possible to return to the position where the recording (playback) was started.

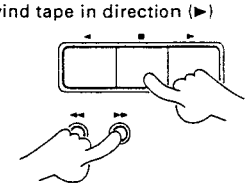
Zero-stop operation

Press the two keys simultaneously. **Main unit only**

To fast wind tape in direction (◄)



To fast wind tape in direction (►)

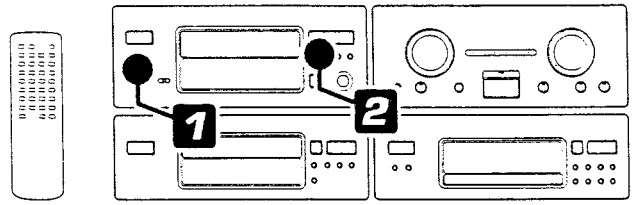


- Tape is fast wound to near the counter reading of "0000" and stops.

Notes

The DPSS may not function normally with the following kinds of tape.

- Tapes containing several no-sound intervals of more than 4 seconds, such as conversation and talk tapes.
- Tapes containing pianissimo sections, such as classical music tape.
- Tapes in which large noise is recorded in blanks between programs.
- Tapes containing blanks between programs that are shorter than 4 seconds.
- Tapes recorded at low level.
- Tapes recorded by cross-fade recording (in which the beginning of next program is overlapped on the end of previous program).



Dash & play

Main unit only

When a non-recorded section of more than 10 seconds is detected during playback, that section is automatically skipped by fast winding to play only the tape sections where sound is recorded.

1 Select the tape transport mode.

Each press of the key switches the modes as follows.

- ① "⇄" ... A tape side is played 8 times, after which playback stops.
- ② "⊃" ... The two tape sides are played once, after which playback stops.
- ③ "⇄⊃" ... The two tape sides are played 8 times, after which playback stops.

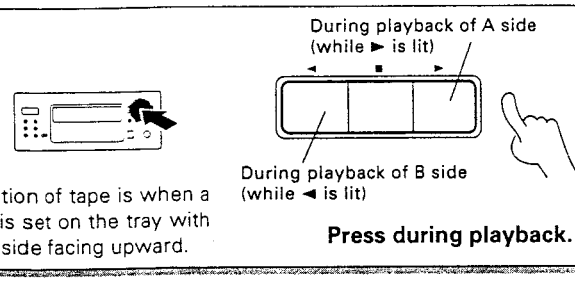
- The tape side which is indicated currently by the transport direction indicator will be played.

2 Start dash & play.

Press simultaneously.

- When the ■ key is pressed, playback stops and the dash & play is cancelled.

One-program repeat playback



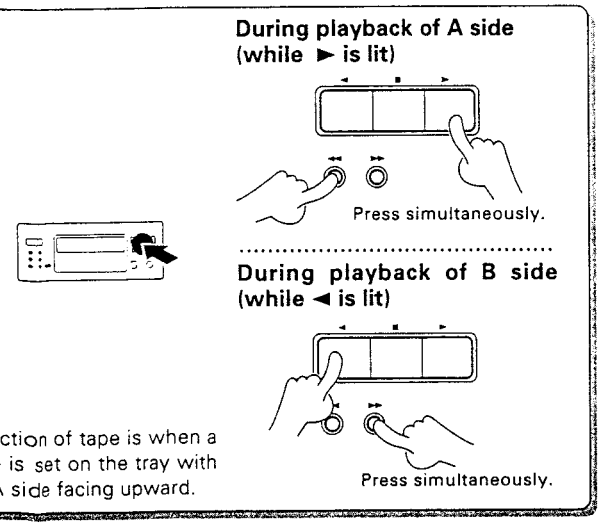
Direction of tape is when a tape is set on the tray with its A side facing upward.

Press during playback.

- The program being played will be repeated 16 times, after which normal playback resumes.
- When the ■ key is pressed, playback stops and the one-program repeat is cancelled.

Rewind playback

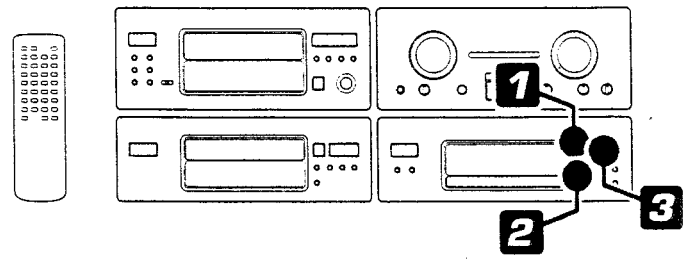
Main unit only



Direction of tape is when a tape is set on the tray with its A side facing upward.

- Tape is rewound until the beginning of the tape side being played, then its playback starts.

Broadcast reception



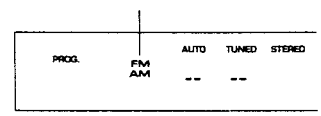
Receiving broadcast stations

1 Select FM or AM

Each press alternates the band.

① FM
② AM

AM/FM indicators



2 Select the tuning mode.

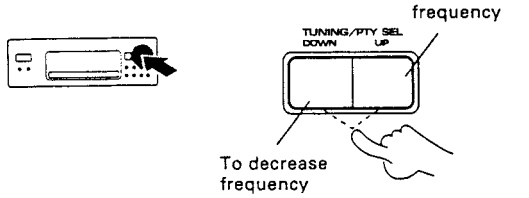
Each press alternates the mode.

① **AUTO lit (Auto tuning)**
② **AUTO not lit (Manual tuning)**

- Normally, use the **AUTO** (Auto tuning) mode.

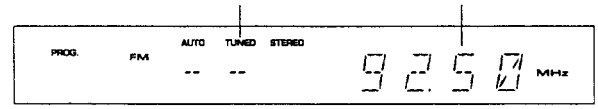
Use the manual tuning mode in case the reception is noisy due to weak waves. (In the manual mode, stereo broadcasts are received in monaural.)

3 Select a station.



TUNED indicator lights when a station is received.

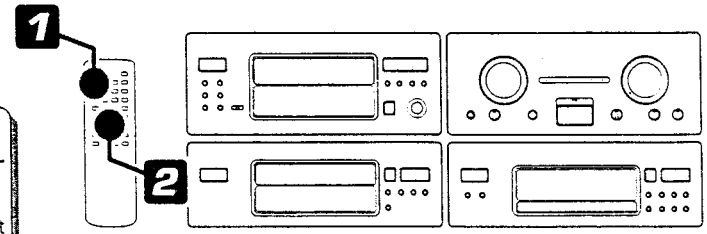
Frequency display



Auto tuning: Receives the next station automatically.
Manual tuning: If you turn and hold the TUNING/PTY SEL knob to the left or right, the frequencies change continously.

Station preset

Use the following procedure to receive radio stations. It is also possible to receive them by one-touch operations by storing up to 39 stations in the preset memory.

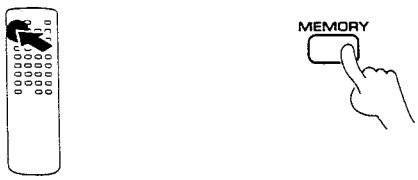


Make preparation.

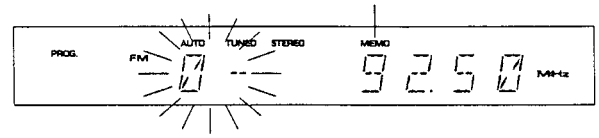
– 30

- Select the **TUNER** input with the **INPUT SELECTOR** knob.
- Receive a station to be stored in preset memory.

1 Press the MEMORY key during reception.



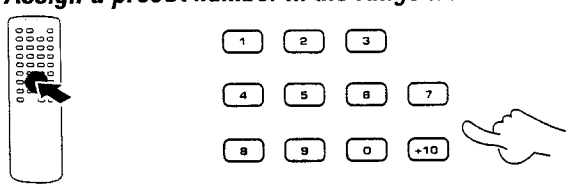
Lights (for 5 sec.)



Go to step 2 within 5 sec.

If more than 5 seconds have elapsed, press the MEMORY key again.

2 Assign a preset number in the range from 1 to 39.

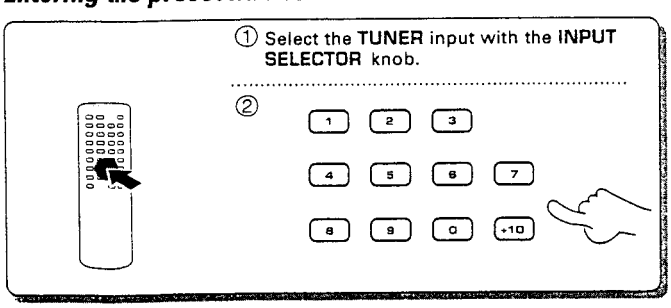


Press the numeric keys as follows...
To store the station in preset "15": +10 5
To store the station in preset "20": +10 +10 0

- If the preset number assigned to a station has already been assigned to another, the new memory content replaces the old content.

Recalling a preset station

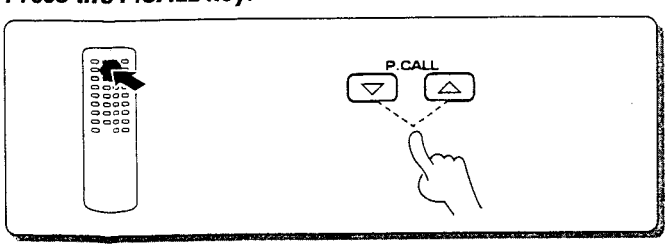
Entering the preset number of the desired station



Press the numeric keys as follows...
To recall the station in preset "15": +10 5
To recall the station in preset "20": +10 +10 0

Receiving preset stations in sequence (Preset call)

Press the P.CALL key.



- Every time the key is pressed, the preset stations are switched over as follows:

When △ is pressed..... 1 → 2 → 3 .....37 → 38 → 39

When ▽ is pressed..... 1 ← 2 ← 3 .....37 ← 38 ← 39

When a key is held depressed . . . . . Preset stations will be skipped at an interval of about 0.5 second.

RDS (Radio Data System)

RDS is a system which transmits useful information (digital data) for FM broadcasts together with the broadcast signal. Tuners and receivers designed for RDS reception can extract the information from the broadcast signal for use with various functions such as automatic display of the station name.

This unit is equipped with the following functions utilizing RDS data:

(In some areas, some functions cannot be activated and some function names may differ as follows.)

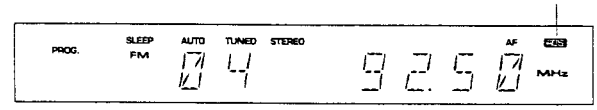
PTY (Program Type Identification) Search : (See page 33.)
The tuner automatically searches for a station which is currently broadcasting a specified program type (genre).

AF (Alternative Frequencies) Search : (See page 34.)
The tuner automatically searches for alternative frequencies broadcasting the same program and selects the best signal.

PS (Program Service Name) Display : (refer to the table below.) When an RDS broadcast is received, the station name is automatically displayed.

RT (Radio Text) Display : (refer to the table below.)
Some radio stations transmit written data.

The **RDS** indicator lights when an RDS broadcast (signal) is received.



DISPLAY key

Pressing the DISPLAY key changes the display contents.

Display mode priority ranking

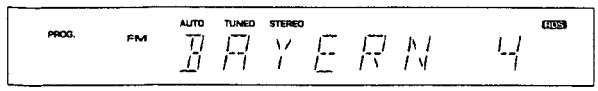
When an RDS broadcast is received :

① ⟶ ② ⟶ ③ ⟶ ④

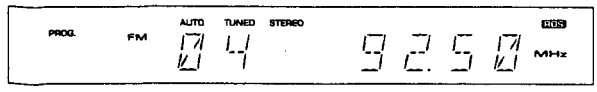
When a non-RDS broadcast is received : ②

① **PS (Program Service Name) Display :**
When an RDS broadcast is received, the station name is automatically displayed.

(If PS data is not transmitted, "NO PS" will be displayed.)

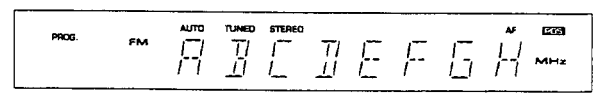


② **Frequency Display :**
The frequency of the current station is displayed.

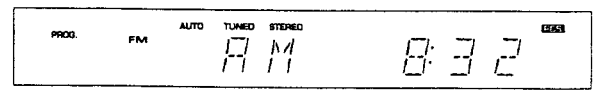


③ **RT (Radio Text) Display :**
Written data received during RDS broadcast reception are scrolled from right to left in the display. (Maximum 64 letters)

(If RT data is not transmitted, "NO RT" will be displayed.)



④ **Clock Display :**
The hour and minute are shown on the display.

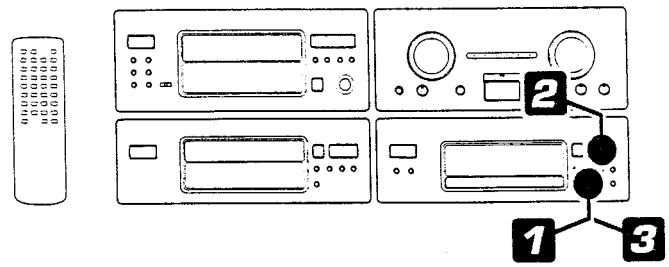


PTY (Program Type Identification) Search

By specifying the type of program (genre) you want to listen to, the tuner automatically searches for a station which is currently broadcasting a program of the the specified type.

Make preparation.

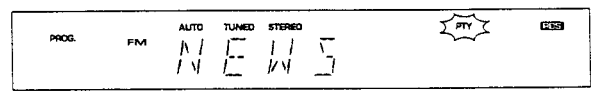
- Set the broadcast band to **FM**.



Searching for a desired program type

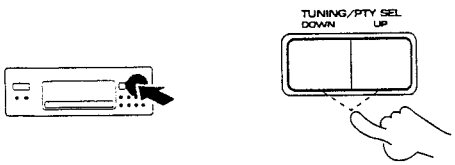
1 *Select the PTY select mode.*

lights.



When an RDS broadcast is received, the program type is shown on the display. If no PTY data is available or if the station is not an RDS station, **"NONE"** is displayed.

2 *Select the desired program type.*



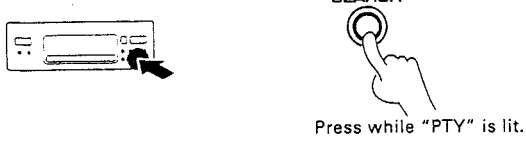
Select while "PTY" is lit.

Select the program type you want from the available 15 types with the **TUNING / PTY SEL** key. Press the key, and when the type you want is displayed, release the key.

	Program Type Name	Display
DOWN ↓	Pop Music	POP M
	Rock Music	ROCK M
	* M.O.R. Music	M.O.R. M
	Light Classical	LIGHT M
	Serious Classical	CLASSICS
	Other Music	OTHER M
	News	NEWS
	Current Affairs	AFFAIRS
	Information	INFO
	Sport	SPORT
	Education	EDUCATE
	Drama	DRAMA
↑ UP	Culture	CULTURE
	Science	SCIENCE
	Varied	VARIED

*M.O.R. Music (Middle of the Road Music)

3 *Start the search.*

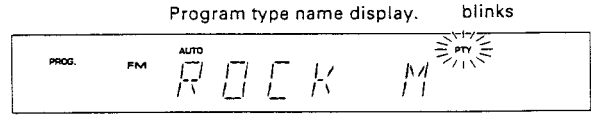


Press while "PTY" is lit.

When searching for a Rock Music broadcast.

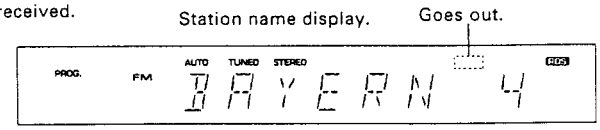
Display while the tuner is searching.

Program type name display. blinks



When a station is received.

Station name display. Goes out.



To change to a different program type:

Repeat steps 1 ~ 3.

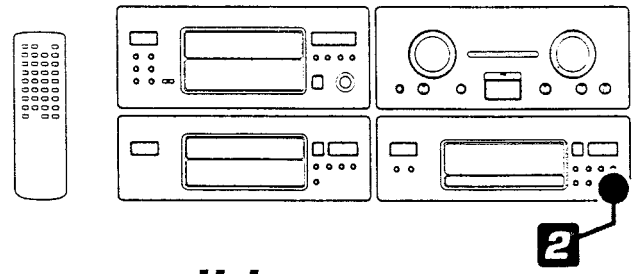
- No sound is heard while **"PTY"** is blinking.
- If a program of the desired type cannot be found, **"NO PROG"** is displayed, then after several seconds the display returns to the original display.
- If a program of the desired type is found, that program is received and the program type name display changes temporarily to the frequency display and then to the station name display.

AF (Alternative Frequencies) Search

If more than one FM station is broadcasting the same program, this function will automatically select the station offering the strongest signal or the least interference. (The AF feature will not function if the RDS and AF indicator is not lit.)

Make preparation.

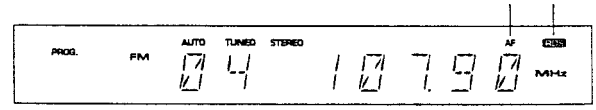
- Select the FM band.



Searching the station with best condition

1 *Receive an RDS broadcast station.*

Check that the indicator is lit.

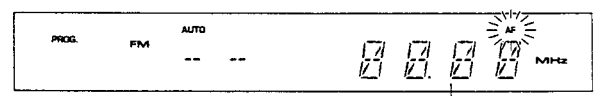


- Tune in the desired station and verify that the RDS indicator lights.
- After a short time, the "AF" indicator lights.
  After verifying that the "AF" indicator is lit, proceed to the next step.

2 *Start the search.*

Display while the tuner is searching.

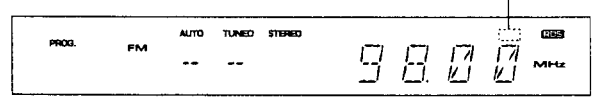
blinks.



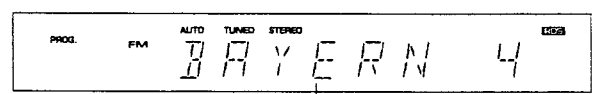
The frequency changes continuously.

When a station is received.

Goes out.



After about 3 seconds



Station name display

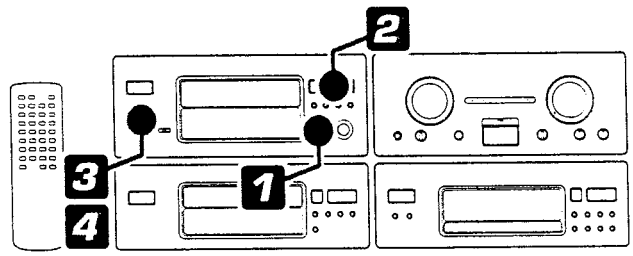
- Scanning (station searching) starts.
- No sound is heard while searching is being carried out.

AF (Alternative Frequencies) Feature

- With some stations, it may take some time for the **"AF"** indicator to light.
- To obtain the best reception conditions, we recommend waiting a few minutes after the **"AF"** indicator lights before pressing the **AF** key.
- It is useful to use the number keys to preset (memorize) stations received with this AF function. (See page 31.)
- The selected frequency may vary depending on the signal conditions.
- There are some RDS stations which do not support this AF function. For such stations, the **"AF"** indicator does not light.

Recording

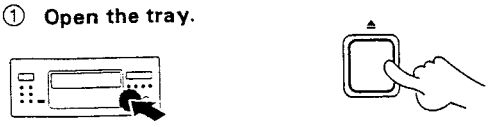
This unit can record sound with excellent high-frequency characteristics thanks to the Dolby HX Pro headroom extension and auto bias adjustment function.



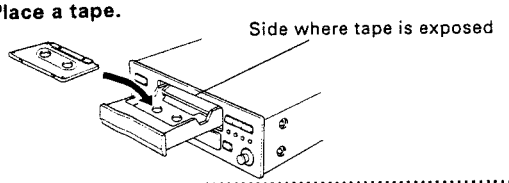
Preparation for recording

1 Load a tape in the deck.

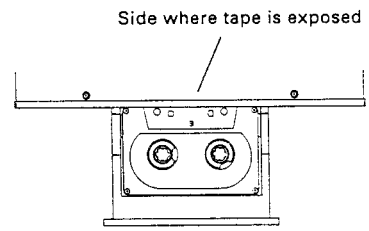
① **Open the tray.**



② **Place a tape.**



③ **Close the tray.**

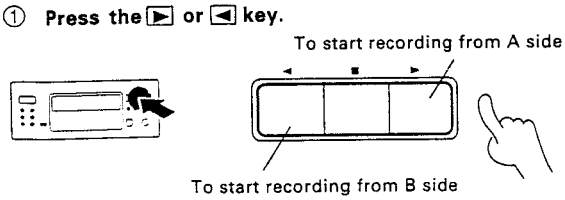


Tape placed on the tray

- The type of tape, that is, Normal, Chrome or Metal, is set automatically.
- Remove tape slack before loading.

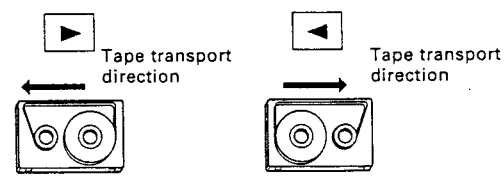
2 Select the tape transport direction.

① **Press the ▶ or ◀ key.**



Direction of tape is when a tape is set on the tray with its A side facing upward.

② **Press the ■ key.**



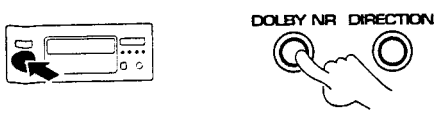
- When recording is started, the tape is transported in the direction selected in this step.
- Wind the tape to the position where recording is to be started.

3 Select the tape transport mode.

Each press of the key switches the modes as follows.

① "⇄" ... A tape side is recorded, after which recording stops
② "⊃" ... The two tape sides are recorded, after which recording stops.
③ "⇆" ... (In this case, too, the two tape sides are recorded, after which recording stops.)

4 Select the Dolby NR mode.



Each press of the key switches the modes as follows.

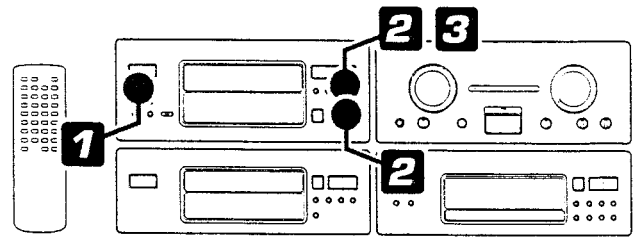
① DOLBY NR B .... B type (general type).
② DOLBY NR C .... C type (with higher performance).
③ DOLBY NR OFF (no indication) .... Dolby NR is not used.

Recording

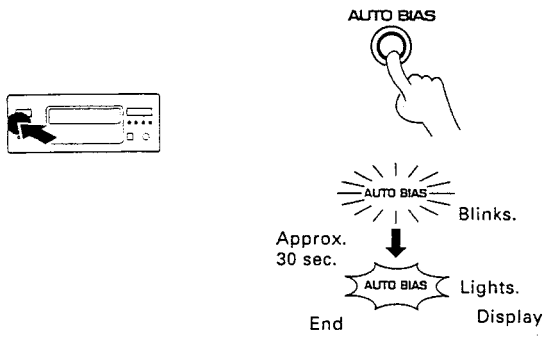
Preparations

→35

- Load a cassette tape in the deck.
- Select the tape transport direction (◄ or ►).
- Select "⇄" (two-side recording) or "⇉" (one-side recording).
- Select the Dolby NR mode.



1 Start auto-bias adjustment.



- The bias adjustment consists of checking the characteristics of the loaded tape and adjusting the deck to allow best-balanced recording. The adjustment results are held in memory unless the tray is opened, so it is not required to re-adjust the bias in case of re-recording.
- The bias adjustment completes in approx. 30 seconds, after which the deck enters the stop mode.
- To abort bias adjustment in the middle, press the ■ key.
- Even if the bias adjustment is not performed, there will be no trouble in recording because a general bias depending on the Normal, Chrome or Metal type of tape is set.

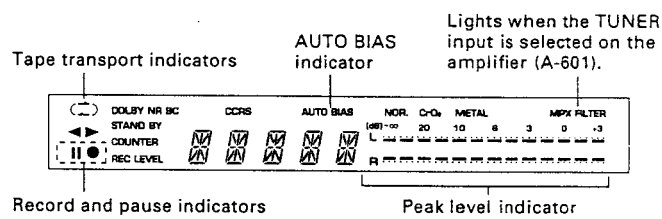
2 Adjust the recording level.

① **Play the contents to be recorded (receives the station to be recorded).**

② **Enter the record-pause mode.**

Press simultaneously.

③ **Adjust the recording level.**



- Adjust so that the peak indicator segments around 0 dB light from time to time.
- When recording from the CD player, put it in the pause mode after the recording level adjustment.

3 Start recording.

① **Play the contents to be recorded (receives the station to be recorded).**

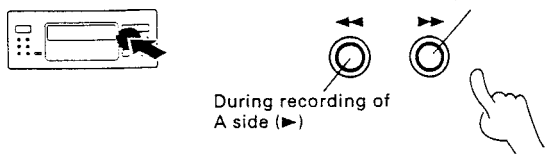
② **Start recording.**

When recording a CD, if the playback is started by pressing a skip key or the numeric keys of the remote control unit provided with the amplifier then pressing the ►/II key, the recording of the cassette deck starts automatically (synchro recording).

- Recording starts.
- Recording stops automatically when the tape side(s) to be recorded have been recorded.

Re-recording

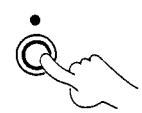
① **Press the key during recording.**



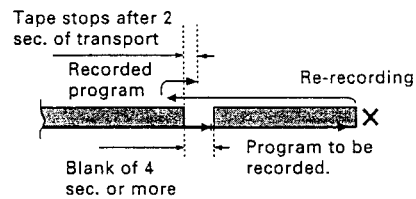
Direction of tape is when a tape is set on the tray with its A side facing upward.

② **Press the ● key twice.**

③ **Press the ● key once.**



- If there is a non-recorded blank of more than 4 seconds before the recording start position, recording is aborted and tape is rewound as shown below.

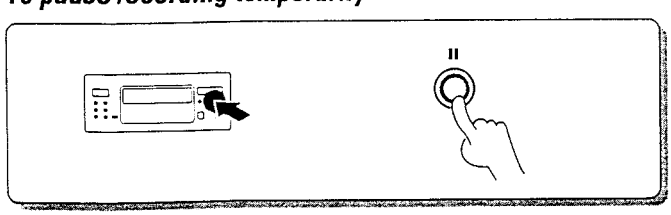


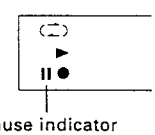
- If there is no recorded program before, the tape will be rewound then stopped.

- The cassette deck enters the record-pause mode after leaving a non-recorded blank of approx. 4 seconds.
- When re-recording from the beginning of tape, feed the leader tape (the first portion of tape that cannot be recorded) before starting re-recording.

- Recording will start.

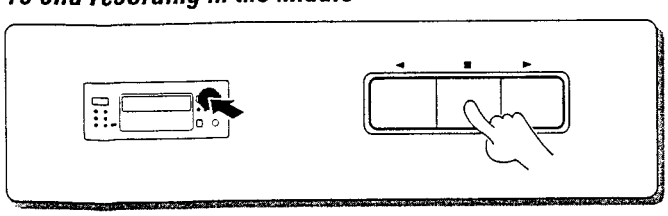
To pause recording temporarily





- Press the ● key to restart recording.

To end recording in the middle



Dolby HX Pro

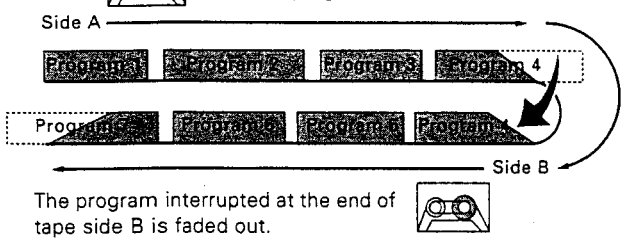
The Dolby HX Pro headroom extension system records high frequencies such as the cymbal sound clearly by controlling the bias current during recording according to the frequency composition of the sound being recorded. This system is activated automatically during recording with this unit.

CCRS recording

The CCRS recording for easy recording of CD is possible.

1 Fade-edit recording –39

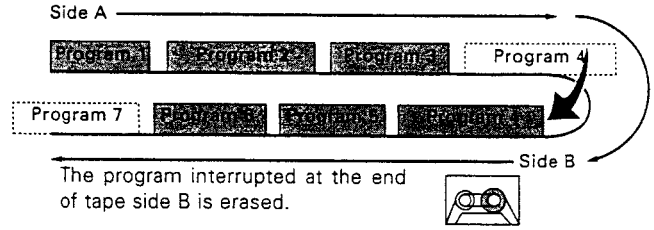
CD tracks are recorded in the original order. The program which is interrupted in the middle at the end of side A is faded out there and side B starts with the fade-in of that program from the middle.



The program interrupted at the end of tape side B is faded out.

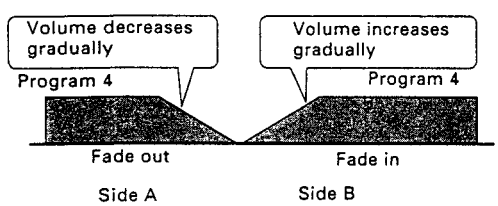
2 Program-edit recording –40

CD tracks are recorded in the order they are programmed. The program which is interrupted in the middle at the end of tape side A is erased, and the recording of side B starts with the beginning of that program.



The program interrupted at the end of tape side B is erased.

Fade-in/Fade-out



Fade-out: Ending of program by gradual decrease of volume.

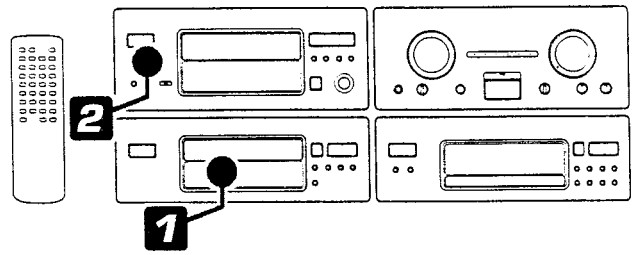
Fade-in: Starting of program by gradual increase of volume.

CCRS recording

This is a convenient function allowing recording of CD onto cassette tape with a single operation.
When the **CCRS** key is pressed, the contents of CD and the characteristics of tape used are checked in approx. 90 seconds, the recording level and bias are set automatically, and recording starts. After recording, the tape stops automatically.
The set contents are held in memory unless the power of the cassette deck is turned OFF or the cassette or CD tray of the cassette deck or CD player is opened, so it is not required to re-adjust the bias in case of re-recording. (The **CCRS** and **AUTO BIAS** indicators light while the set contents are held in memory.)

Fade-edit recording

With this function, the program which is interrupted in the middle at the end of tape side A is faded out and the recording of side B starts with the middle of that program.



Preparations

–35

- Load a cassette tape in the deck.
- Select the tape transport direction (◄ or ►).
- Select "⇉" (two-side recording) or "⇄" (one-side recording).
- Select the Dolby NR mode.
- Select the CD input on the amplifier.
- Load a CD in the CD player.

1 Check that the TRACK indicator is lit on the CD player.

- If the **TRACK** indicator is not lit, press the **PROGRAM** key of the remote control unit provided the amplifier to light it.

2 Start edit-recording.

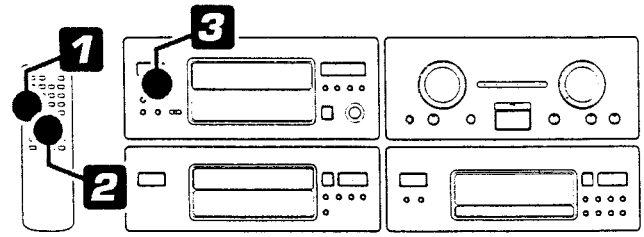
- Recording starts after the adjustments of the recording level and bias.
- CD tracks are recorded in the original order.

Notes

1. If the **CCRS** key is pressed during playback of the CD player, the playback stops and the CCRS setting (preparations for edit recording) starts.
2. The automatic recording level setting in the edit recording utilizes the suitable section for this purpose on the CD.
3. Edit recording is not possible with a long music which cannot be accommodated on a single tape side, for example in case of classical music.
4. If the deck is set for one-side recording (⇄), the treatment in case a program is interrupted at the end of tape side A is applied only on side A.
5. When a program interrupted in the middle at the end of tape sides is faded out, the last part of the previous program may sometimes be faded out if the last track is interrupted in a short period after the beginning.

Program-edit recording

With this function, CD tracks are recorded in the order programmed by the user and in a way that no program is interrupted at the end of tape sides.

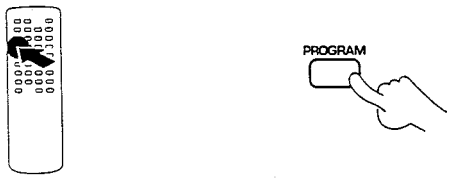


Preparations

→35

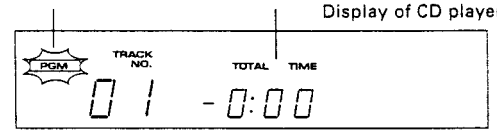
- Load a cassette tape in the deck.
- Check the tape transport direction (◄ or ►).
- Select "⊃" (two-side recording) or "⇄" (one-side recording).
- Select the Dolby NR mode.
- Select the CD input on the amplifier.
- Load a CD in the CD player.

1 Put the CD player in the PGM mode.

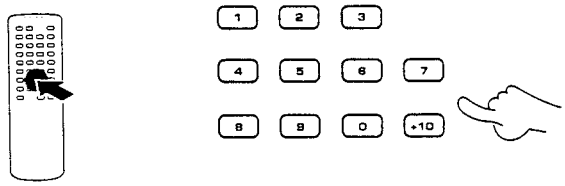


Lights "SINGLE TIME" changes to "TOTAL TIME".

Display of CD player



2 Program tracks in the order you want to record them.



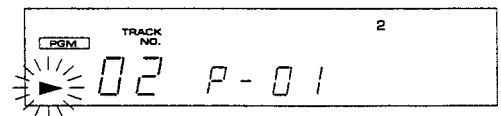
Press the numeric keys in the following order ....

To enter track Nos. 2, 5 and 25:

2 5 +10 +10 5

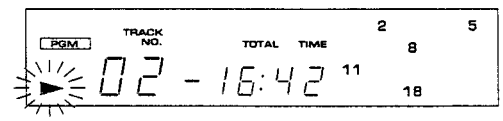
Entered track No. is displayed for a few seconds.

Display of CD player



Total playing time of the programmed tracks is displayed.

Display of CD player



- Up to 32 tracks can be programmed. "FULL" is displayed if you attempt to program a 33st track.
- It is also possible to select tracks by referring to the disc label while the tray is open.
- Once the total playing time of the programmed tracks has exceeded 100 minutes, the remaining time on the disc will not be displayed.

3 Start edit recording.

Main unit

- Recording starts after the adjustments of the recording level and bias.

Notes

1. If the **CCRS** key is pressed during playback of the CD player, the playback stops and the CCRS setting (preparations for edit recording) starts.
2. The automatic recording level setting in the edit recording utilizes the suitable section for this purpose on the CD.
3. Edit recording is not possible with a long music which cannot be accommodated on a single tape side, for example in case of classical music.
4. If the deck is set for one-side recording (⇄), the treatment in case a program is interrupted at the end of tape side A is applied only on side A.

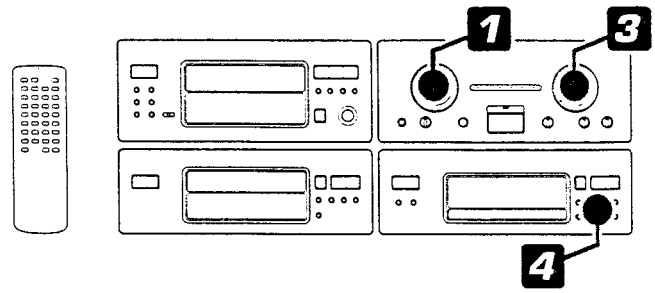
Timer operation

Adjust the clock before setting the timer.–18

The timer function makes it possible to record sound without your attendance or to wake up to music.

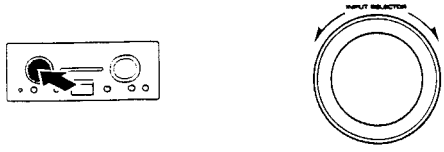
Timer playback (recording)
Plays the selected source at the set ON time.

Sleep timer
The power is turned OFF automatically after the specified period has elapsed.



Timer programming

1 Select the input source to be played (recorded).



2 Make preparations for the play (recording).

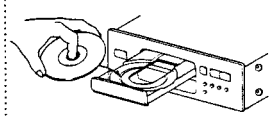
- **To listen to radio**

Select a station.

–31

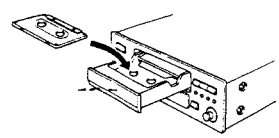
- **To listen to CD**

Insert a disc.
(Program playback is not possible.)



- **To listen to tape**

① Insert a tape.



② Set the TIMER switch to PLAY.

- **Playing the auxiliary input source**

Make timer setting of the component connected to the AUX jacks.

- **For recording**

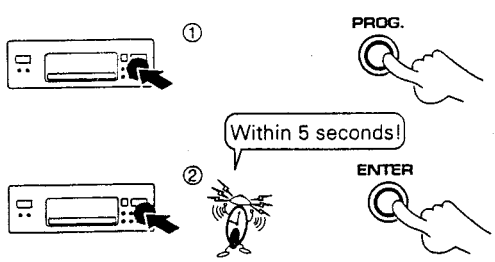
① Make preparations for recording.

② Set the TIMER switch to REC.

3 Adjust the listening volume.

- When recording the tuner or AUX input, set the volume to the minimum position.

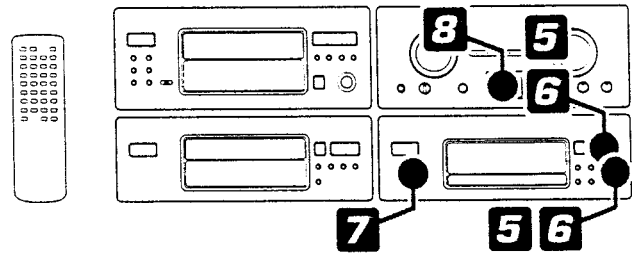
4 Select a program No.



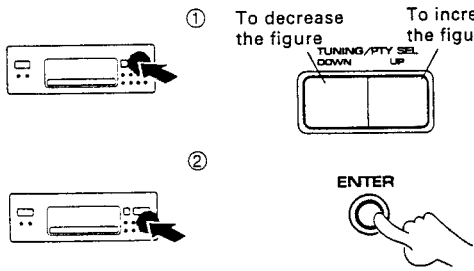
- The selected program No. lights.
- "ON TIME" and "OFF TIME" are displayed in order.
- If a program No. under which a timer program has already been reserved, it is replaced by the new timer program.

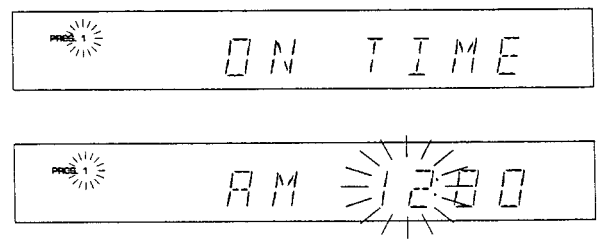
Each press of the key switches the program numbers as follows.

① **PROG.1** (Program 1)
② **PROG.2** (Program 2)
③ **PROG.** (When timer operation is not required)



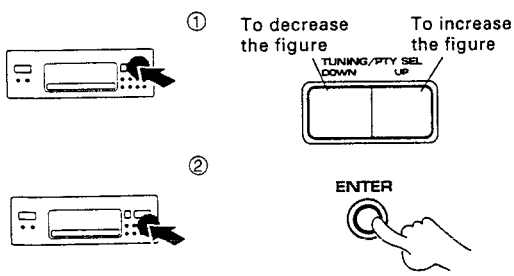
5 Enter the ON time.

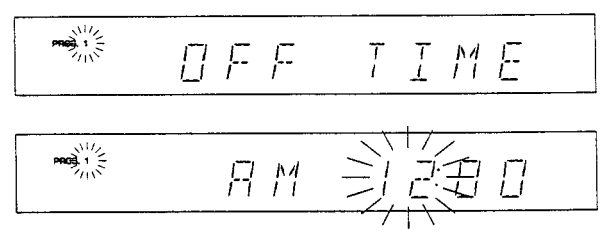




- After entering the figure of "hour" with the procedure in ① an ②, enter the figure of "minute" using the same procedure.
- If you make a mistake, restart from step **4**.

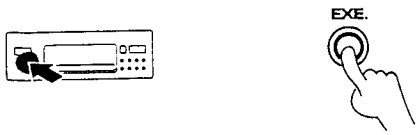
6 Enter the OFF time.





- After entering the figure of "hour" with the procedure in ① an ②, enter the figure of "minute" using the same procedure.
- If you make a mistake, restart from step **4**.

7 Select the timer program No. to be used.

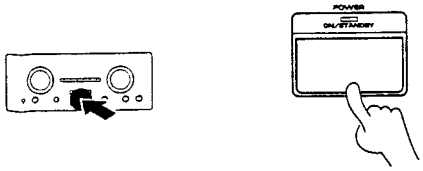


Each press of the key switches the program numbers as follows.

- ①**PROG. 1** ..... Execution of program 1 only.
- ②**PROG. 2** ..... Execution of program 2 only.
- ③**PROG. 1 2** ..... Execution of programs 1 and 2.
- ④**PROG.** ..... When timer operation is not required

- The selected program No. lights.
- The timer will not function unless a program No. is selected.

8 Switch the power OFF.



- Press the switch on the A-601 amplifier to switch the power of the entire system OFF .

Check the reservation content.

Select the program number to be checked.

Each press of the key switches the program numbers as follows.

→ ①**PROG. 1** (Program 1)
②**PROG. 2** (Program 2)
③**PROG.** (When timer operation is not required)

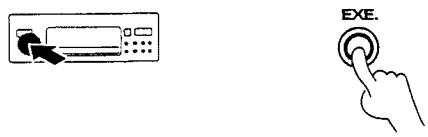
- The reserved contents will be displayed for 5 seconds per item. After this, the previous display content appears again.

To change the reserved contents

Restart the procedure of "Timer programming" from the beginning.

When timer operation is not required

Press to turn OFF all of the program numbers.



Each press of the key switches the program numbers as follows.

→ ①**PROG. 1** (Program 1)
②**PROG. 2** (Program 2)
③**PROG. 1 2** (Program 1 and 2)
④**PROG.** (When timer operation is not required)

- The reservation contents are held in memory.

To set the same timer program again

Press to turn ON the program number to be set.

Each press of the key switches the program numbers as follows.

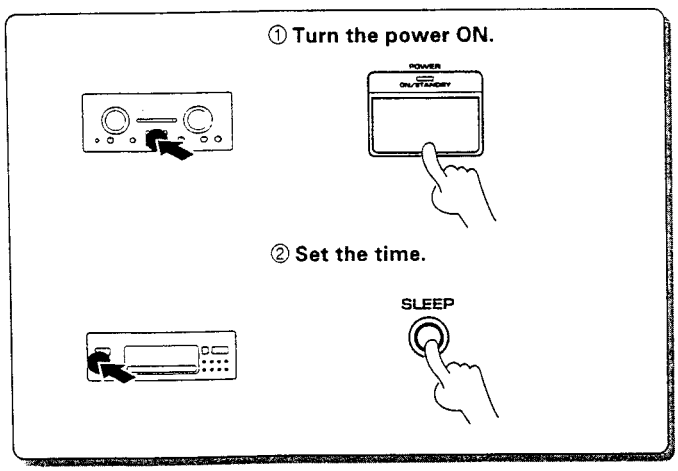
→ ①**PROG. 1** (Program 1)
②**PROG. 2** (Program 2)
③**PROG. 1 2** (Program 1 and 2)
④**PROG.** (When timer operation is not required)

- Also prepare the disc or tape and adjust the listening volume.

Note The reservation contents cannot be cleared. The contents are cleared only when they are changed.

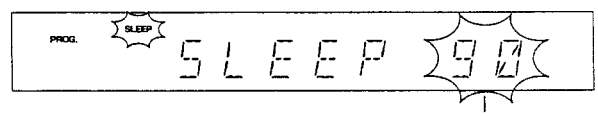
Sleep timer

Set the number of minutes after which the power is to be turned OFF.



- The power is turned OFF automatically after the set time has elapsed.
- Each press decreases the time by 10 minutes. The maximum time that can be set is 90 minutes.

90→80→70...30→20→10→Cancel→90→80...



Duration for sleep timer

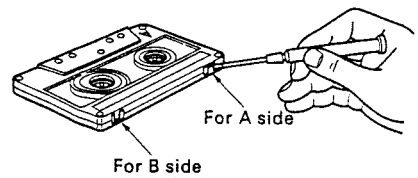
To cancel

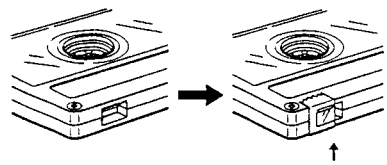
Turn the power OFF or press the **SLEEP** key until the sleep time is cancelled.

Maintenance

Notes on cassette tape

Safety tab (accidental erasure prevention tab)
After an important recording has been finished, break the safety tab, to prevent the recorded contents from being erased or recorded on accidentally.

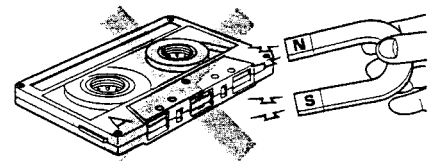




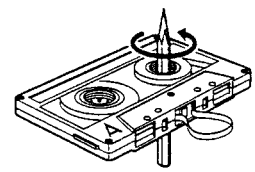
To re-record

Apply tape only to the position where the tab has been removed.

To store cassette tapes
Do not store the tapes in a place which is subject to direct sunlight, or near equipment that generates heat. Keep the cassette tapes away from any magnetic field.



When there is slack in the tape
In such a case, insert a pencil into the reel hole and wind the reel hub to remove the slack.



Notes

1. 120-minute cassette tape
   Since a 120-minute cassette tape is very thin, the tape could adhere to the pinch roller or be easily cut. It is recommended that these tapes not be used with this unit to prevent possible damage.
2. Endless tapes
   Do not use an endless tape, as this could damage the mechanism of the unit.

Cleaning the head section

Cleaning of heads and surroundings
To use the unit with the best condition for a long period of time, remember to clean the heads (record/play and erase), capstans and pinch rollers after every 10 hours of tape playback.

For the cleaning, use a cleaning cassette available in audio stores. For details, read the instruction manual of your cleaning tape.

Demagnetizing the head
When the record/play head is magnetized, noise may result. Demagnetize the head using a head demagnetizer (head eraser) available in audio stores.

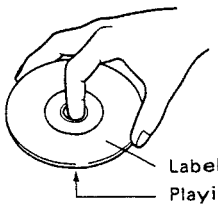
Beware of condensation

When water vapor comes into contact with the surface of cold material, water drops are produced.
If condensation occurs, correct operation may not be possible, or the unit may not function correctly.
This is not a malfunction, however, and the unit should be dried. (To do this, turn the POWER switch ON and leave the unit as it is for several hours.)

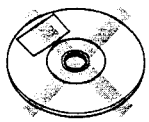
Be especially careful in the following conditions:

- When the unit is brought from a cold place to a warm place, and there is a large temperature difference.
- When a heater starts operating.
- When the unit is brought from an air-conditioned place to a place of high temperature with high humidity.
- When there is a large difference between the internal temperature of the unit and the ambient temperature, or in conditions where condensation occurs easily.

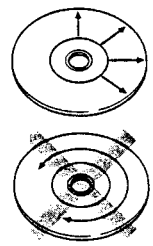
Disc handling precautions



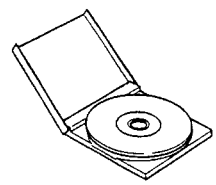
Handling
Hold compact discs so that you do not touch the playing surface.



Do not attach paper or tape to either the playing side or the label side of compact discs.

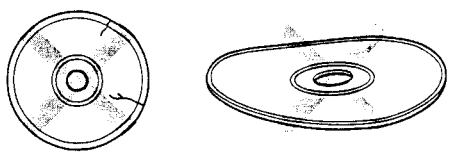


Cleaning
If fingerprints or foreign matter become attached to the disc, lightly wipe the disc with a soft cotton cloth (or similar) from the center of the disc outwards in a radial manner.



Storage
When a disc is not to be played for a long period of time, remove it from the CD player and store it in its case.

Caution on disc used



Never play cracked or warped disc.
During playback, the disc rotates at high speed in the player. Therefore, to avoid danger, never use a cracked or deformed disc or a disc repaired with tape or adhesive agent.

WARNING NOTICE:
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Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
"DOLBY", the double-D symbol and "HX PRO" are trade-marks of Dolby Laboratories Licensing Corporation.

Memory backup function

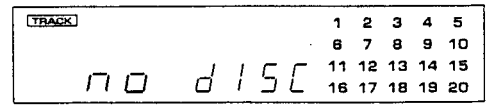
Stored contents which are cleared immediately when power plug is unplulugged from power outlet	Clock display
Stored contents which are cleared in at least 3 days after power plug is unplulugged from power outlet	Amplifier unit POWER status(ON or OFF) Input selection Tuner unit Receiving band Frequency Preset stations Program settings Cassette deck unit Transport direction DOLBY NR Play back mode

Note related to transportation and movement (CD player)

Before transporting or moving this unit, carry out the following operations.

① **Turn the power ON but do not load a disc.**
- Press the ▶/II key to check that no disc is present on the tray.

② **Wait a few seconds and verify that the display shown appears.**



③ **Turn the power OFF.**

In case of difficulty

Remote control unit

Remote control operation is not possible.	• Batteries are exhausted. • The system control cord is not connected properly. • The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. • The source component to be operated does not contain the tape or CD. • An attempt is made to play a tape which is being recorded in the cassette deck.	• Replace with new batteries. →15 • Connect properly referring to "System connections". →6 • Operate the remote control unit within the controllable range. • Place the tape or CD in the source component to be played. • Wait until the recording is completed.

Amplifier

Sound is not output.	• The speaker cords are disconnected. • The volume is set to minimum position. • The **MUTING** key is set to ON (with the STAND BY indicator blinking). • The speakers switch is set to OFF. • The connection cords are connected improperly. • The **LINE/TAPE** switch of the equalizer (GE-1001) is set to TAPE (with the TAPE indicator lit). • The shorting pins are not inserted.	• Connect properly referring to "System connections". • Adjust the volume to a proper level. →17 • Press the **MUTING** key to OFF (on the remote control unit). • Set the SPEAKERS switch to the proper position. • Check connections, and correct as required. →4 • Set the **LINE/TAPE** switch to LINE (so that the TAPE indicator goes out). • Insert the shorting pins securely.
No sound comes out and the STAND BY indicator is blinking.	• The speaker cords are short-circuited.	• Turn the power OFF, remove the short-circuit, and press the POWER key to ON again.
Sound is not output from one of the speakers.	• The speaker cords are disconnected. • The **BALANCE** control is set to the fully clockwise or counterclockwise position.	• Connect properly referring to "System connections". • Adjust the left and right balance. →18

Tuner

Radio stations cannot be received.	• No antenna is connected. • The broadcast band is not set properly. • The frequency of the desired station is not tuned.	• Connect an antenna. • Set the broadcast band properly. →30 • Tune the frequency of the desired station.
Interference.	• Noise due to ignition noise of an automobile. • Noise due to an influence from an electric appliance. • Noise due to a nearby TV set.	• Install the outdoor antenna apart from the road. • Turn off the power of the appliance. • Install the system more apart from the TV set.
A station which was preset cannot be received by pressing the corresponding numeric key. (Remote control unit)	• The preset station belongs to a frequency that cannot be received. • The preset memory was cleared because the power cord had been unplugged for a long period of time. • The TUNER input is not selected on the amplifier (A-601).	• Preset a station with a receivable frequency. • Preset the station again. →31 • Select the TUNER input.

Last channel memory
when the power is turned ON or when the receiving band (AM or FM) is changed, the last station which was received before will be received again.

CD player

Disc is loaded, player does not play.	• Disc is loaded upside down. • Disc is loose. • Disc is dirty. • Disc is cracked. • Condensation has occured on the optical lens unit.	• Load the disc again with its label side up. • Insert the disc properly. • Wipe off the dust on the surface of the disc referring to "Disc handling precautions". –47 • Replace the disc with a new one. • Remove condensed dew by referring to "Beware of condensation". –47
No sound.	• Disc is not loaded. • Play mode is not entered (The play / pause indicator is not lit.) • Disc is too dirty. • Disc is cracked. • The connection cords are inserted loosely.	• Load a disc. • Press the ▶/II key. • Wipe off the dust on the disc surface referring to "Disc handling precautions". –47 • Replace the disc with a new one. • Connect all connection cords firmly.
Music is interrupted. (Sound is skipped.)	• Disc is too dirty. • Disc is cracked. • Oscillation is applied to this unit.	• Wipe off the dust on the disc surface referring to "Disc handling precautions". –47 • Replace the disc with a new one. • Try selecting a place where no strong vibrations occur by changing the installation place, etc.

Cassettedeck

Sounds is not produced when the Play key is pressed.	• The connection cords are not connected properly. • The head is dirty. • Tape is irregularly wound and hard to take up. • A non-recorded tape is being played.	• Connect properly referring to "System connections". • Clean the head referrring to "Cleaning the head section". →46 • Replace the tape. • Play a recorded tape.
The deck does not work when an operation key is pressed.	• The tray is not closed completely. • The operation key was pressed immediately after closing the tray. • The operation key was pressed within less than 3 seconds after the power was turned on. • Tape is not inserted. • Tape is irregularly wound and hard to take up. • Tape has been fully wounded to reel.	• Close the tray completely. • Press the desired operation key in a few seconds after closing the tray. • Press the desired operation key in more than 3 seconds after tuning the power on. • Insert a tape. • Replace the tape. • Change the tape transport direction or insert the tape inversely.
DPSS malfunctions.	• The tape is not suitable for DPSS operation, for example the spaces between tunes are too short.	• Read "DPSS operation". →28
CCRS does not work.	• A recordable tape is not inserted in Deck. • A disc is not placed in the CD player. • The disc is dirty. • The system control cord is not connected.	• Insert a recordable tape in Deck and press the **CCRS** key. • Place a disc in the CD player and press the **CCRS** key. • Clean the disc, place it in the CD player, and press the **CCRS** key. →47 • Connect the system control cord. →6
The tray wil not open when the open/close key is pressed.	• The key is pressed during recording.	• Press the key in stop mode.
Sound is hoarse, or high frequencies are not audible.	• The head is dirty. • The tape is stretched or winkled.	• Clean the head referring to "Cleaning the head section". →46 • Replace the tape.
Sound is distorted.	• The recording level has not been set. • A tape recorded with distorted sound is being played.	• Read the description in "Recording". →36 • Replace the tape.
Recording is not initiated when the Recording key is pressed.	• The protection tab on the cassette has been broken.	• Use a cassette with unbroken tab or close the hole.
Noise level is high.	• The head is magnetized. • External noise is induced. • A tape recorded with Dolby NR ON is being played with Dolby NR OFF.	• Demagnetize the head referring to "Cleaning the head section". • Install the system apart from other electrical appliances and TV set. • Press the **DOLBY NR** key to B or C.
Sound is vibrating.	• The capstans or pinch rollers are dirty. • Tape is irregularly wound.	• Clean the head referring "Cleaning the head section". • Wind the tape regularly by fast forwarding, rewinding or playing it fully from one reel to another.
Playback or recording starts immediately when the power is switched ON.	• The TIMER switch is set to PLAY or REC.	• Set the TIMER switch to OFF unless timer playback or timer recording is required.

Notes

1. Since this system uses microcomputers, they may not operate normally due to interfering noise, etc. In such a case, unplug the power cord from the power outlet and, insert the power cord into the power outlet again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.
3. With some tapes, a squeaky noise is produced when the tape is stopped automatically. This is due to the tape protection function, and not a malfunction.
4. Do not use 120-minute tapes, for the tape is too thin and gets easily tangled.

Specifications

⚠ Caution : Read this page carefully to ensure safe operation.

Amplifier

Rated power output
(DIN) From 20 Hz to 20 kHz, 0.5 % T.H.D.
at 4 Ω ..... 42 W + 42 W
at 8 Ω ..... 45 W + 45 W
(DIN) 1 kHz
at 4 Ω ..... 50 W + 50 W
at 8 Ω ..... 48 W + 48 W
Total harmonic distortion ..... 0.02 % (1 kHz, 20 W, 4 Ω)
Frequency response
LINE (CD) ..... 5 Hz ~ 75 kHz, +0 dB, –3 dB
Signal to noise ratio
(IHF'66)
LINE (CD) ..... 100 dB
CD DIRECT ..... 103 dB
(DIN)
LINE (CD) ..... 62 dB (50 mW output)
CD DIRECT ..... 62 dB (50 mW output)
Input sensitivity / impedance
LINE (CD) ..... 200 mV / 47 kΩ
ADAPTOR IN ..... 200 mV / 47 kΩ
Tone control
BASS ..... ±10 dB(at 100Hz)
TREBLE ..... ±10 dB(at 10kHz)
Output level / impedance
TAPE REC ..... 200 mV / 150 Ω
ADAPTOR OUT ..... 200 mV / 150 Ω
SUPER WOOFER preout ..... 2 V / 600 Ω

General

Power consumption ..... 120 W
AC outlet
SWITCHED ..... 1 (200 W max.)
Dimensions ..... W : 270 mm
H : 116 mm
D : 343 mm
Weight (Net) ..... 6.5 kg

Tuner

FM tuner section

Tuning frequency range ..... 87.5 MHz ~ 108 MHz
Usable sensitivity (DIN at 75Ω)
MONO ..... 1 μV / 11.2 dBf
Signal to noise ratio (DIN weighted at 1 kHz)
MONO ..... 71 dB (65.2 dBf input)
STEREO ..... 63 dB (65.2 dBf input)
Stereo separation (DIN)
1 kHz ..... 45 dB
Selectivity (DIN ±300 kHz) ..... 64 dB
Frequency response (30 Hz ~ 15 kHz) ..... + 0.5 dB, –2.0 dB
Output level / impedance
(FM at 1 kHz, 75 kHz dev) ..... 800 mV / 600Ω

AM tuner section

Tuning frequency range ..... 531 kHz ~ 1,602 kHz
Usable sensitivity ..... 12 μV / (500 μV/m)
Signal to noise ratio (at 30% mod. 1 mV input) ..... 50 dB
Output level / impedance
(at 30% mod. 1mV input) ..... 240 mV / 600Ω

General

Power consumption ..... 10 W
AC outlet
UNSWICHED ..... 1 (400W max.)
Dimensions ..... W : 270 mm
H : 98 mm
D : 319 mm
Weight (Net) ..... 3 kg

Cassettedeck

Track system ..... 4 track 2 channel stereo
Recording system ..... AC bias (Frequency : 105 kHz)
Heads
  Playback / recording head 1
  Erase head 1
Motors ..... DC motor X 1
Wow & flutter ..... 0.09 % (W.RMS)
Fast winding time ..... Aprox. 120 seconds (C - 60 tape)
Frequency response
  Normal tape ..... 25 Hz to 18,000 Hz, ±3 dB
  CrO_2 tape ..... 25 Hz to 19,000 Hz, ±3 dB
  Metal tape ..... 25 Hz to 20,000 Hz, ±3 dB
Signal to noise ratio
  Dolby NR OFF ..... 58 dB
  Dolby B NR ON ..... 66 dB
  Dolby C NR ON ..... 73 dB
  (3rd H.D. 3 %, Metal tape)
Input sensitivity / impedance
  Line (REC) ..... 123 mV / 47 kΩ
Output level / impedance
  Line (PLAY) ..... 775 mV / 1 kΩ

General

Power consumption ..... 20 W
AC outlet
  UNSWITCHED ..... 1 (150 W max.)
Dimensions ..... W : 270 mm
H : 116 mm
D : 329 mm
Weight (Net) ..... 4.3 kg

CD player

Format

System ..... Compact disc digital audio system
Laser ..... Semiconductor laser
Number of channels ..... 2 channels
Playing rotation ..... 200 rpm ~ 500 rpm (CLV)

D / A converter

D / A conversion ..... 1 Bit
Oversampling ..... 8 fs (352.8 kHz)

Audio

Frequency response ..... 4 Hz ~ 20 kHz, ±0.5 dB
Signal to noise ratio ..... More than 102 dB
Dynamic range ..... More than 97 dB
Total harmonic distortion .... Less than 0.0037 % (at 1 kHz)
Channel separation ..... More than 98 dB (at 1 kHz)
Wow & Flutter ..... Unmeasurable limit
Output level / impedance
  Fixed ..... 2 V / 0.57k Ω
Digital output
  Optical ..... -15 dBm ~ -21 dBm
(Wave length 660 nm)

General

Power consumption ..... 10 W
Dimensions ..... W : 270 mm
H : 98 mm
D : 315 mm
Weight (Net) ..... 3.5 kg

Note KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.